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CONTRACT NO: DN00619

PROJECT: 14BPR.3.1

STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

DIVISION 14

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	14BPR.3.1	1	145
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
14BPR.3.1	—	P.E.	
14BPR.3.1	—	CONSTR.	

LOCATION:

CHEROKEE COUNTY – 13 BRIDGES

CLAY COUNTY – 1 BRIDGE

GRAHAM COUNTY – 2 BRIDGES

HAYWOOD COUNTY – 19 BRIDGES

HENDERSON COUNTY – 11 BRIDGES

JACKSON COUNTY – 12 BRIDGES

MACON COUNTY – 4 BRIDGES

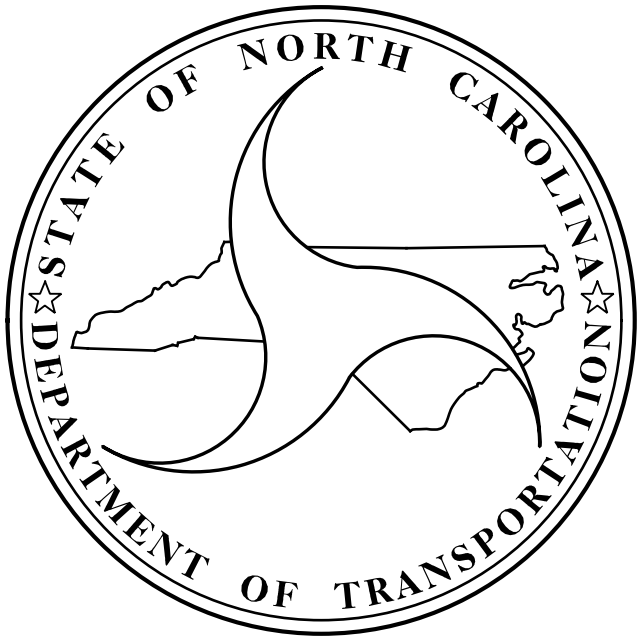
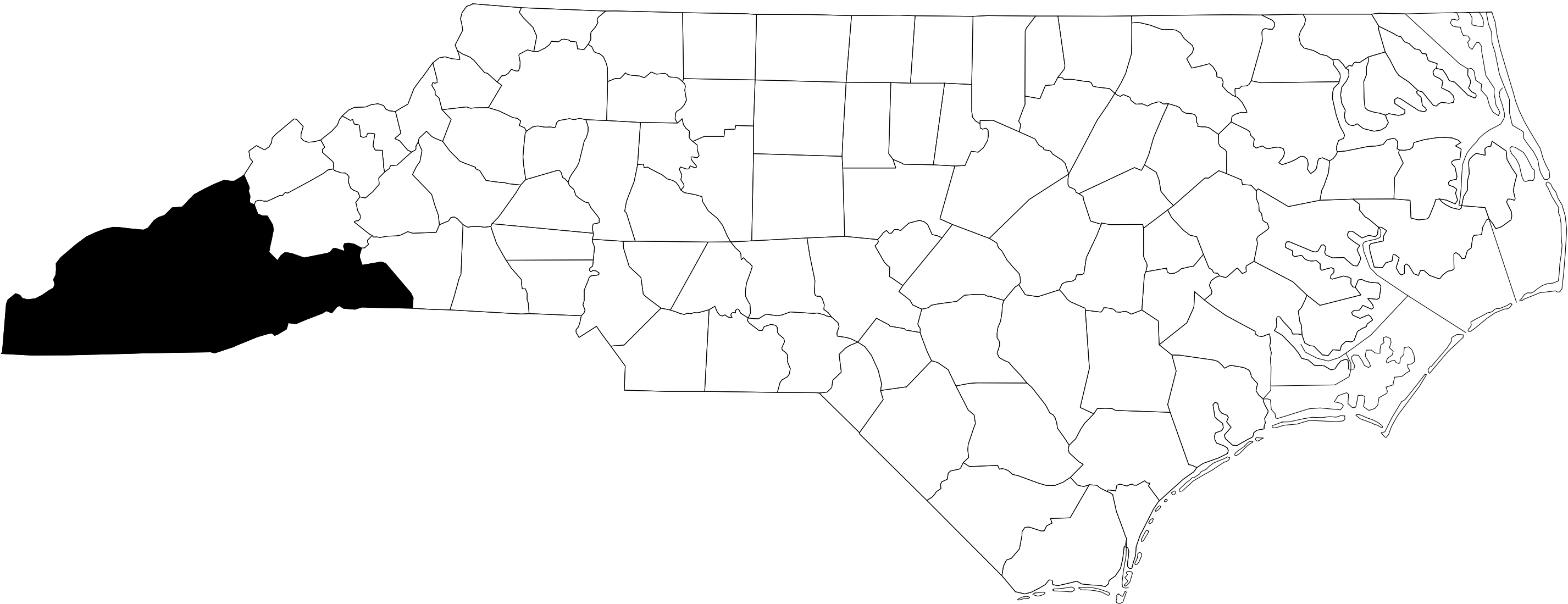
POLK COUNTY – 4 BRIDGES

SWAIN COUNTY – 5 BRIDGES

TRANSYLVANIA COUNTY – 2 BRIDGES

TYPE OF WORK:

BRIDGE PRESERVATION – DECK OVERLAYS WITH LATEX MODIFIED CONCRETE, LATEX MODIFIED CONCRETE – VERY EARLY STRENGTH, AND BRIDGE JOINT REPLACEMENTS



DESIGN DATA

SEE SUBTITLE SHEET FOR EACH COUNTY

PROJECT LENGTH

SEE SUBTITLE SHEET FOR EACH COUNTY

PLANS PREPARED BY:



Gannett Fleming

Excellence Delivered **As Promised**

2610 Wycliff Road

Suite 102

Raleigh NC 27607-3073

(919) 420-7660

NC Lic. No. F-0270

RICK NELSON, P.E.

PROJECT DESIGN ENGINEER

2018 STANDARD SPECIFICATIONS

LETTING DATE:

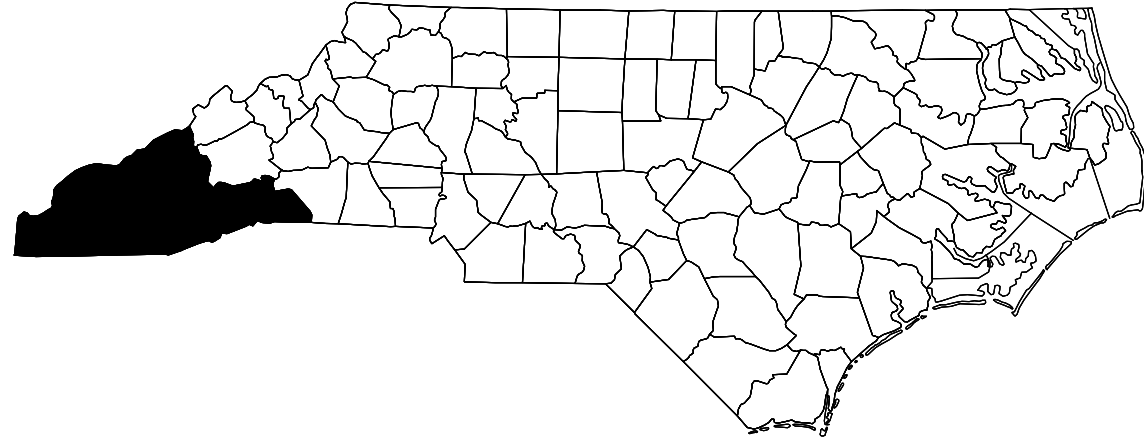
MAY 8, 2018

DocuSigned by:
Eric B. Nelson Jr.
4/3/2018



RICK NELSON, P.E.

PROJECT DESIGN ENGINEER



STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

DIVISION 14

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BRIDGE PRESERVATION - DECK OVERLAYS WITH LATEX MODIFIED CONCRETE, LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH, AND BRIDGE JOINT REPLACEMENTS

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S-129 THRU S-138

S-139 THRU S-142

SN

DESCRIPTION

TITLE SHEET

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

STRUCTURAL PLANS - CHEROKEE COUNTY

STRUCTURAL PLANS - CLAY COUNTY

STRUCTURAL PLANS - GRAHAM COUNTY

STRUCTURAL PLANS - HAYWOOD COUNTY

STRUCTURAL PLANS - HENDERSON COUNTY

STRUCTURAL PLANS - JACKSON COUNTY

STRUCTURAL PLANS - MACON COUNTY

STRUCTURAL PLANS - POLK COUNTY

STRUCTURAL PLANS - SWAIN COUNTY

STRUCTURAL PLANS - TRANSYLVANIA COUNTY

STANDARD NOTES

TOTAL BILL OF MATERIAL													
	INCIDENTAL MILLING	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C	ASPHALT BINDER FOR PLANT MIX	GROOVING BRIDGE FLOORS	CLASS AA CONCRETE	REINFORCING STEEL	EPOXY COATED REINFORCING STEEL	CLASS II, SURFACE PREPARATION	* CLASS III, SURFACE PREPARATION	LATEX MODIFIED CONCRETE OVERLAY	PLACING AND FINISHING LATEX MOD. CONCRETE OVERLAY	VOLUMETRIC MIXER
	SQ. YDS	TONS	TONS	TONS	SQ. FT.	CU. YDS.	LBS.	LBS.	SQ. YDS.	SQ. YDS.	CU. YDS.	CU. YDS.	LUMP SUM
TOTAL	3759	93	225	20.5	57924	30.8	2670	587	219.6	0.6	366.6	5916	LUMP SUM

* ESTIMATED QUANTITY FOR BIDDING PURPOSES.

TOTAL BILL OF MATERIAL													
	EXPANSION JOINT SEAL REPAIR	FOAM JOINT SEAL	SILICONE JOINT SEALANT	SYNTHETIC RUBBER EXPANSION JOINT SEAL	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	* CONCRETE FOR DECK REPAIR	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION	MODULAR JOINT DEMOLITION	HYDRO-DEMOLITION OF BRIDGE DECK	PLACING AND FINISHING LATEX MOD. CONCRETE OVERLAY-VES	REMOVE & REPLACE BRIDGE DECK ISLAND	SCARIFYING BRIDGE DECK
	LN. FT.	LN. FT.	LN. FT.	LN. FT.	CU. YDS.	CU. FT.	CU. FT.	SQ. FT.	SQ. FT.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.
TOTAL	249.3	438.2	8389.9	1184.7	80.5	100.0	1648.2	6240.3	204.0	7288	1372	114.7	7363


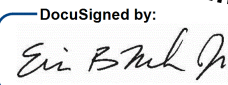
* ESTIMATED QUANTITY FOR BIDDING PURPOSES.

PROJECT NO. 17BPR.3.1

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
 **Gannett Fleming**
Excellence Delivered *As Promised*

2610 Wycliff Road
Suite 102
Raleigh, NC 27607-3073
(919) 420-7660
[NC Lic. No. F-0270]

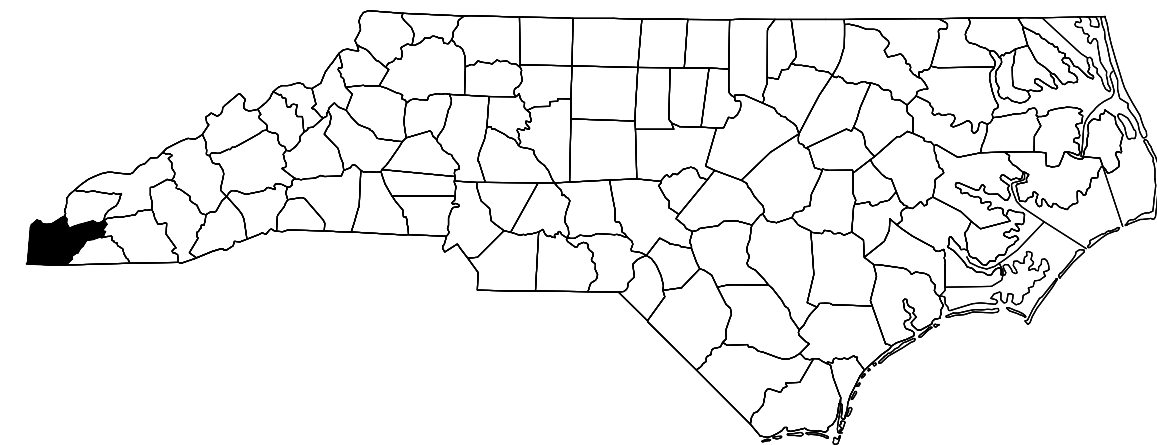

DocuSigned by:
 4/3/2018
BA9F91762D7044A

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TOTAL BILL OF MATERIAL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS 142
2			4			



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

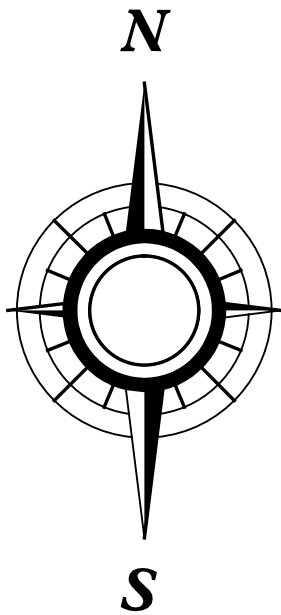
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N.C.	14BPR.3.1	S-2

CHEROKEE COUNTY

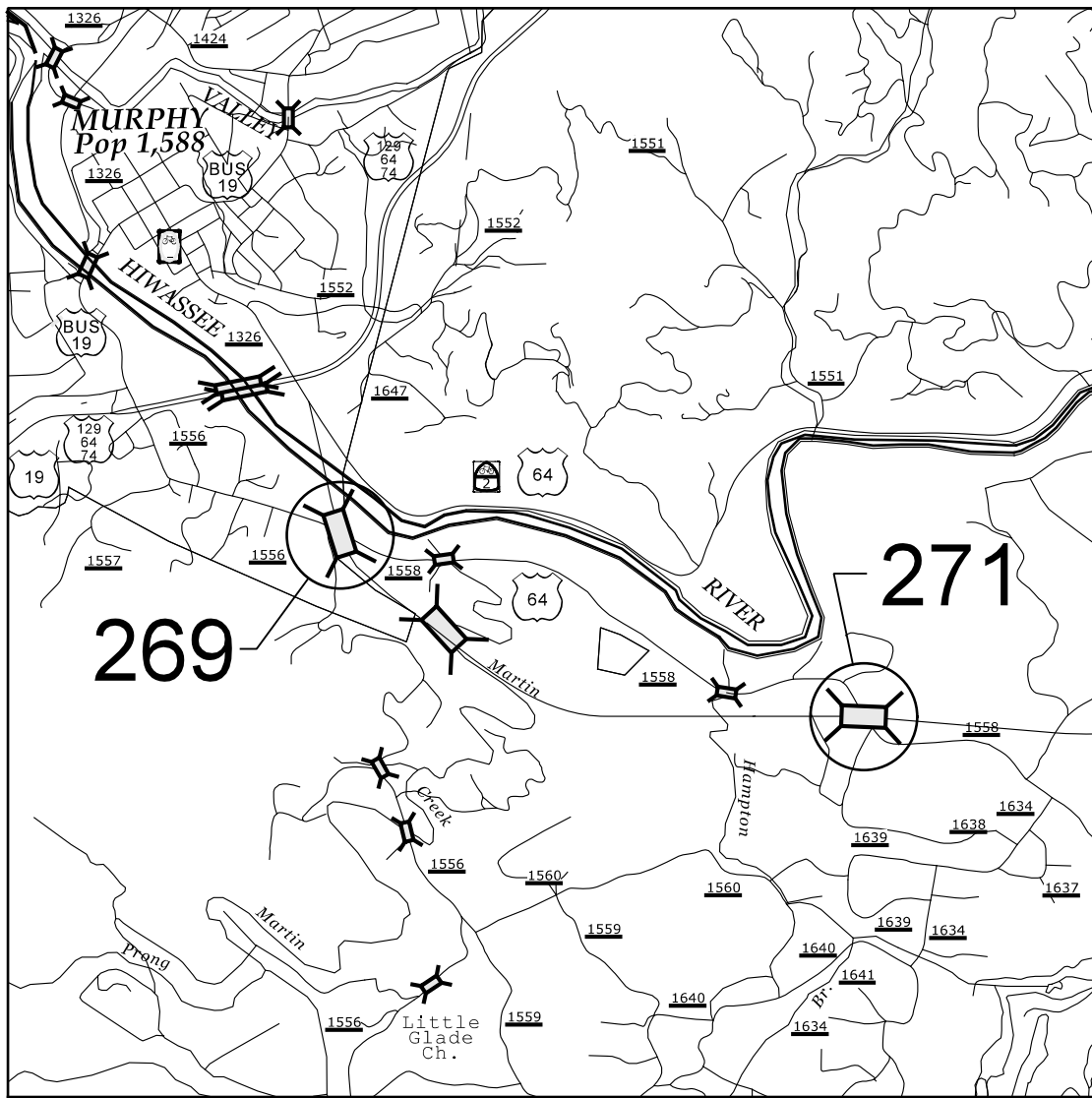
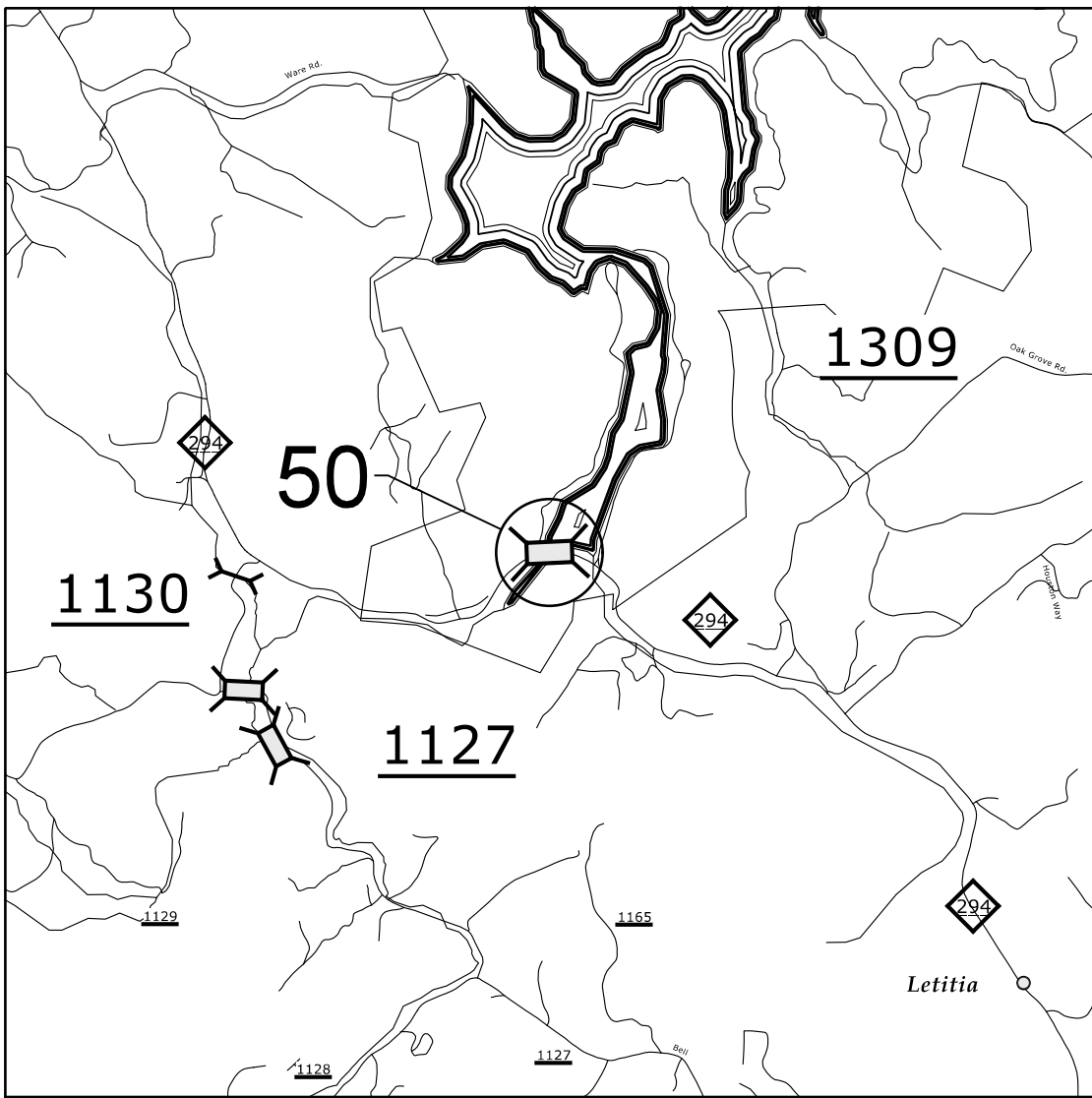
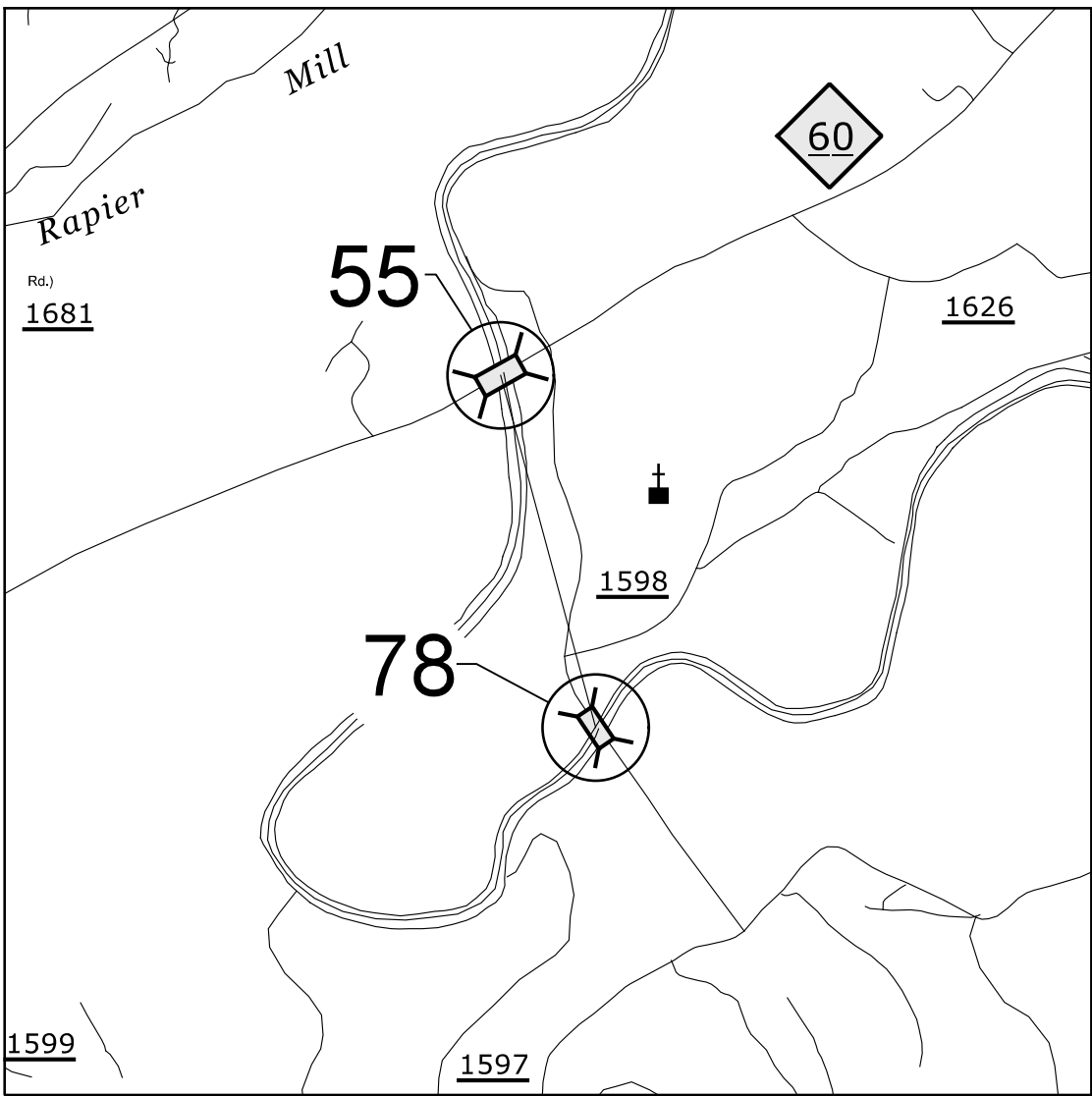
LOCATION: CHEROKEE COUNTY:

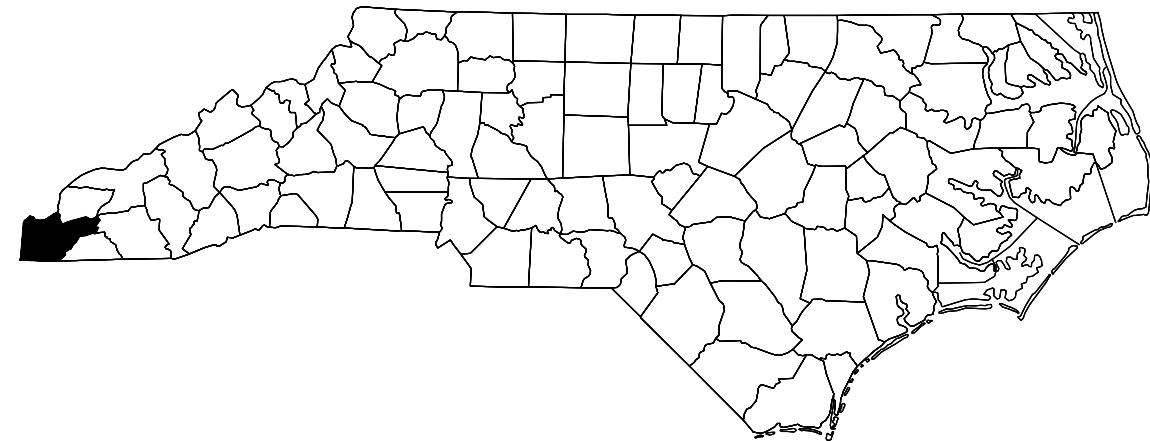
BRIDGE #050 ON NC294 OVER LAKE CHEROKEE
BRIDGE #055 ON NC60 OVER NOTTELY RIVER
BRIDGE #071 ON US19B OVER VALLEY RIVER
BRIDGE #078 ON SR1598 OVER NOTTELY RIVER
BRIDGE #087 ON US19, US74 & US129 EBL OVER VALLEY RIVER
BRIDGE #088 ON US19, US74 & US129 WBL OVER VALLEY RIVER
BRIDGE #089 ON US19, US74 & US129 EBL OVER SOUTHERN R.R.

BRIDGE #090 ON US19, US74 & US129 WBL OVER SOUTHERN R.R.
BRIDGE #091 ON US19, US74 & US129 EBL OVER JUNALUSKA CREEK
BRIDGE #093 ON US19, US74 & US129 WBL OVER JUNALUSKA CREEK
BRIDGE #112 ON SR1347 OVER HANGING DOG CREEK
BRIDGE #269 ON US64 OVER SR1558
BRIDGE #271 ON US64 OVER SR1558



TYPE OF WORK: BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENTS





STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-3

CHEROKEE COUNTY

LOCATION: CHEROKEE COUNTY:

BRIDGE #050 ON NC294 OVER LAKE CHEROKEE
BRIDGE #055 ON NC60 OVER NOTTELY RIVER
BRIDGE #071 ON US19B OVER VALLEY RIVER
BRIDGE #078 ON SR1598 OVER NOTTELY RIVER
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TYPE OF WORK: BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENTS

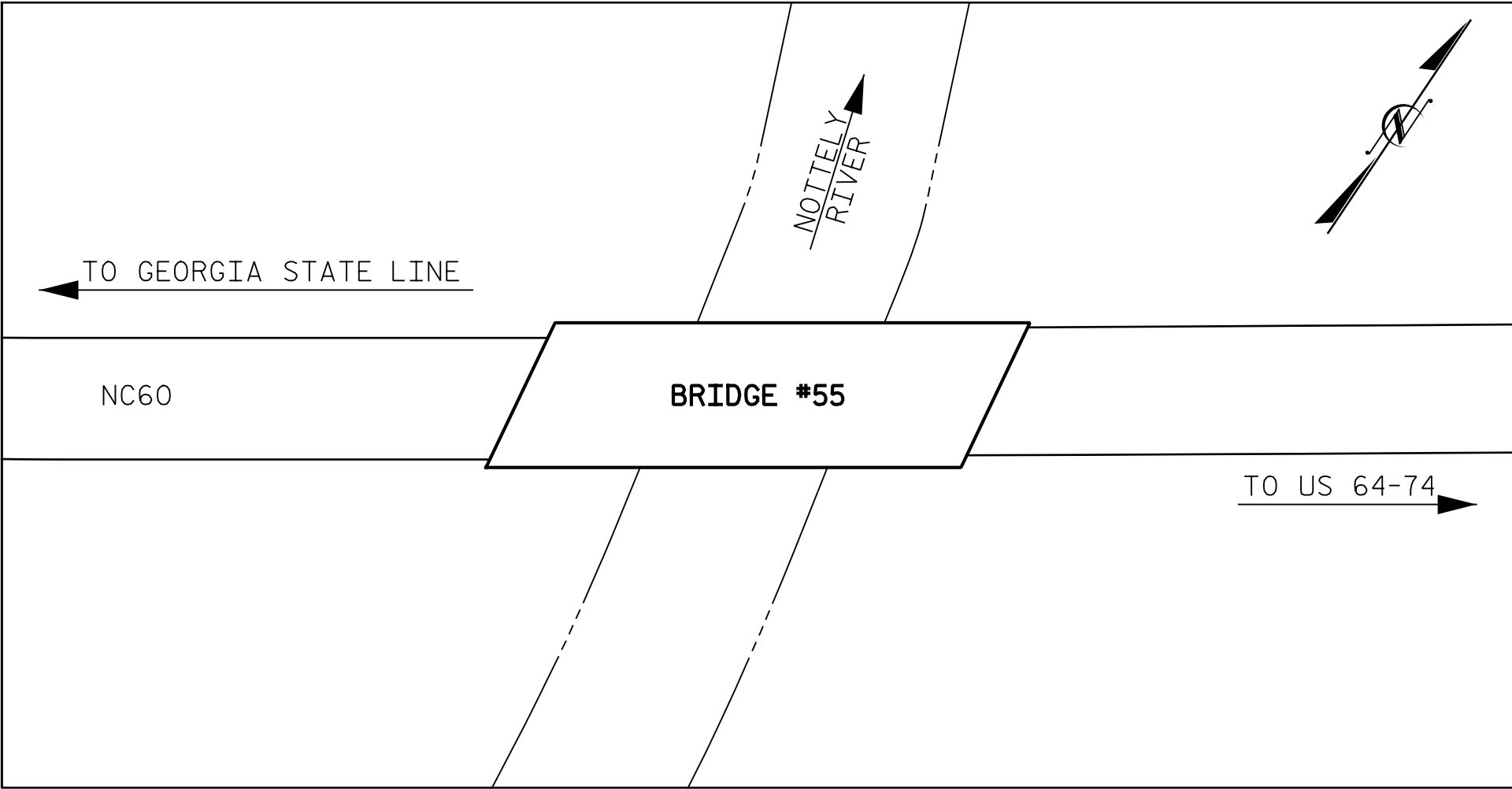
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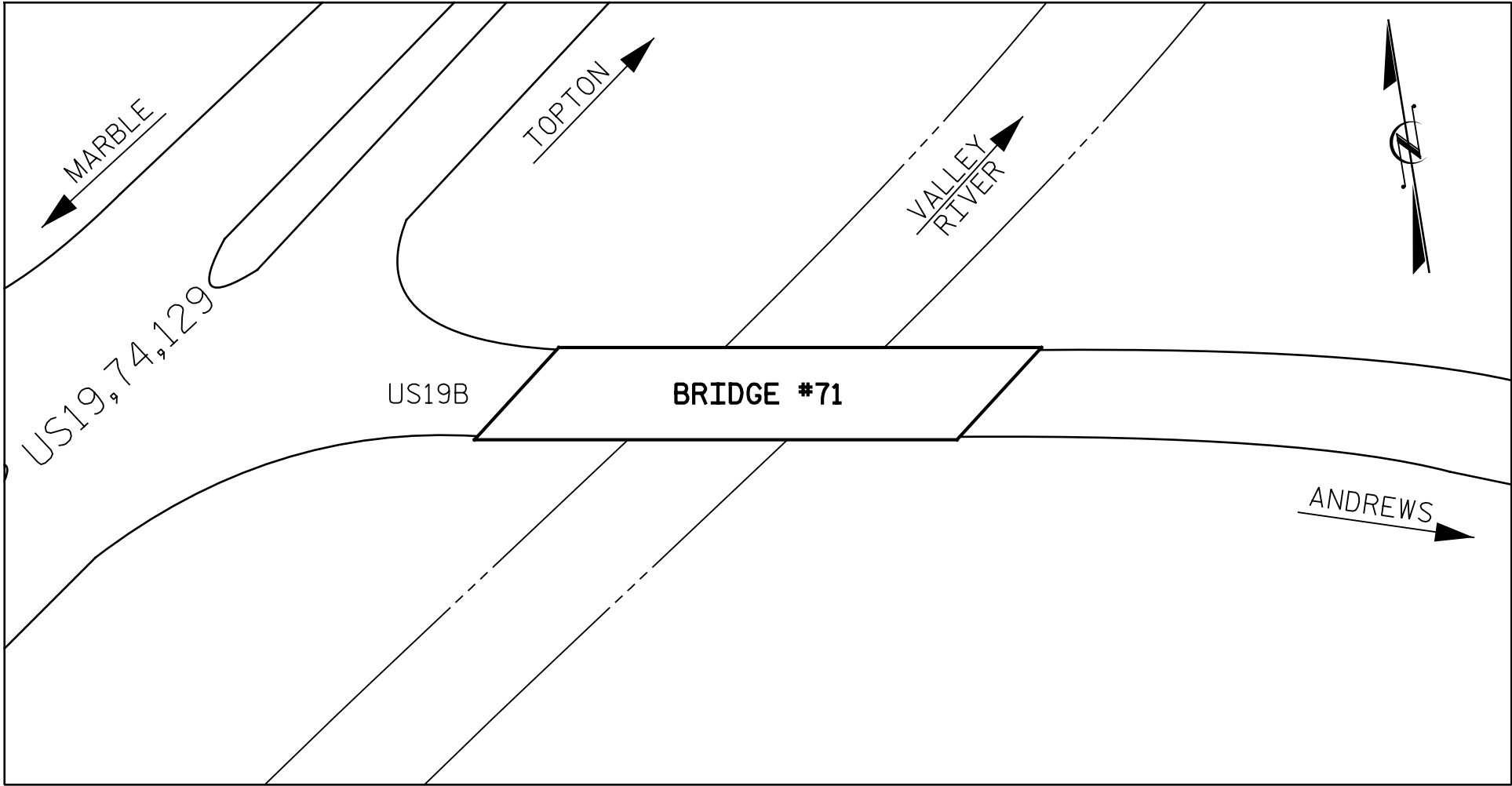
S-2
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DESCRIPTION

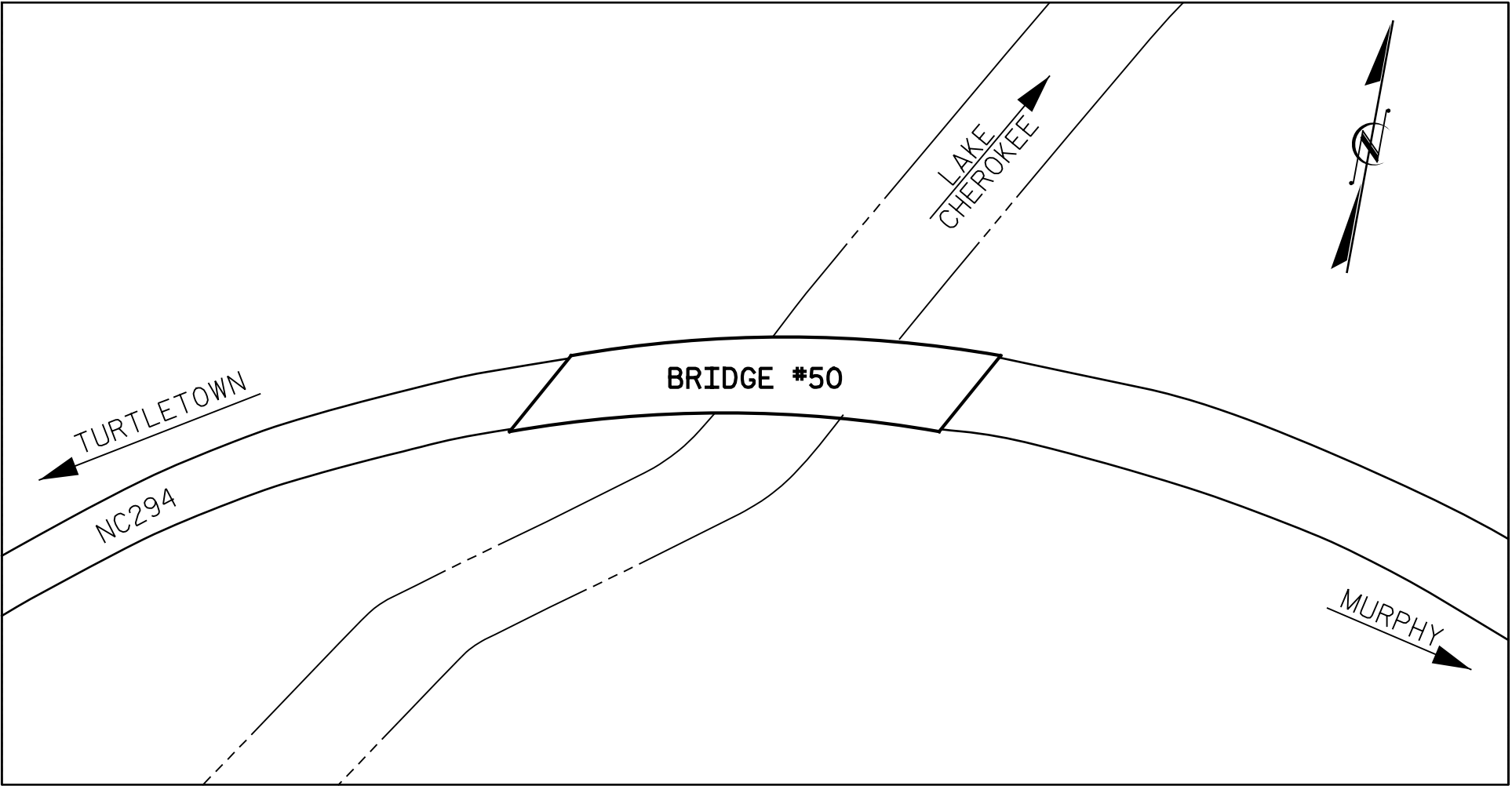
TITLE SHEET
INDEX OF SHEETS
STRUCTURAL PLANS – JOINT REPLACEMENTS



BRIDGE #55



BRIDGE #71



BRIDGE #50

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

BILL OF MATERIAL FOR CHEROKEE COUNTY

	VOLUMETRIC MIXER	SILICONE JOINT SEALANT	* CONCRETE FOR DECK REPAIR	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION
	LUMP SUM	LN. FT.	CU. FT.	CU. FT.	SQ. FT.
190050	LUMP SUM	205.2	-	49.2	193.2
190055	LUMP SUM	151.6	-	36.4	145.6
190071	LUMP SUM	234.4	-	56.4	226.4
190078	LUMP SUM	137.6	-	16.2	64.8
190087	LUMP SUM	172.8	-	20.6	82.4
190088	LUMP SUM	172.8	-	20.6	82.4
190089	LUMP SUM	198.8	-	23.8	95.4
190090	LUMP SUM	198.8	-	23.8	95.4
190091	LUMP SUM	168.0	-	20.0	80
190093	LUMP SUM	168.0	-	20.0	80
190112	LUMP SUM	48.0	-	-	-
190269	LUMP SUM	117.6	-	14.0	55.8
190271	LUMP SUM	49.0	-	-	-
TOTAL	LUMP SUM	2022.6	-	301.0	1201.4

* ESTIMATED QUANTITY FOR BIDDING PURPOSES.

GENERAL NOTES

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

PROJECT NO. 14BPR.3.1
CHEROKEE COUNTY

SHEET 1 OF 2



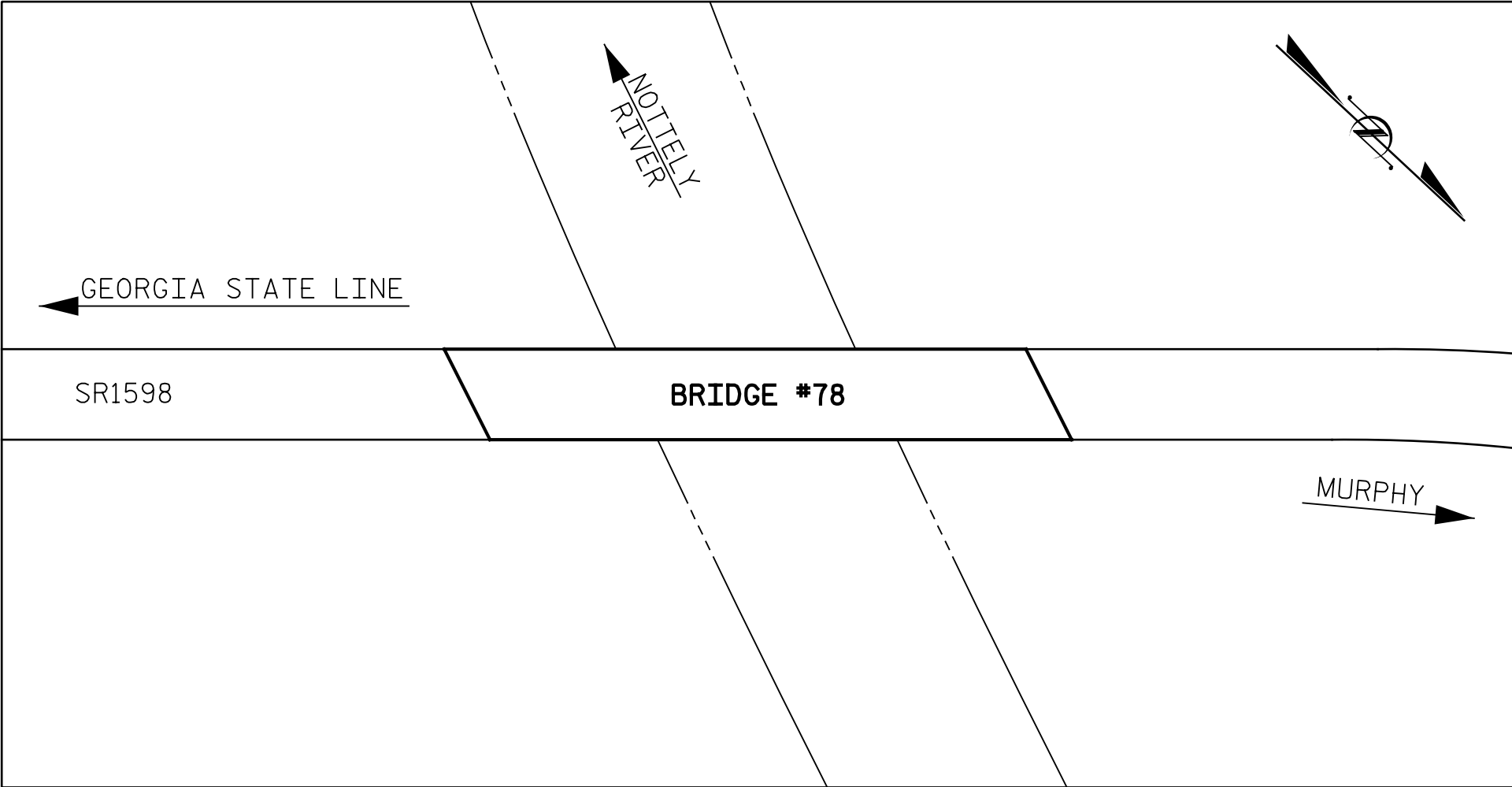
DocuSigned by:
Eric B. Nelson
4/3/2018

PLANS PREPARED BY:
Gannett Fleming
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

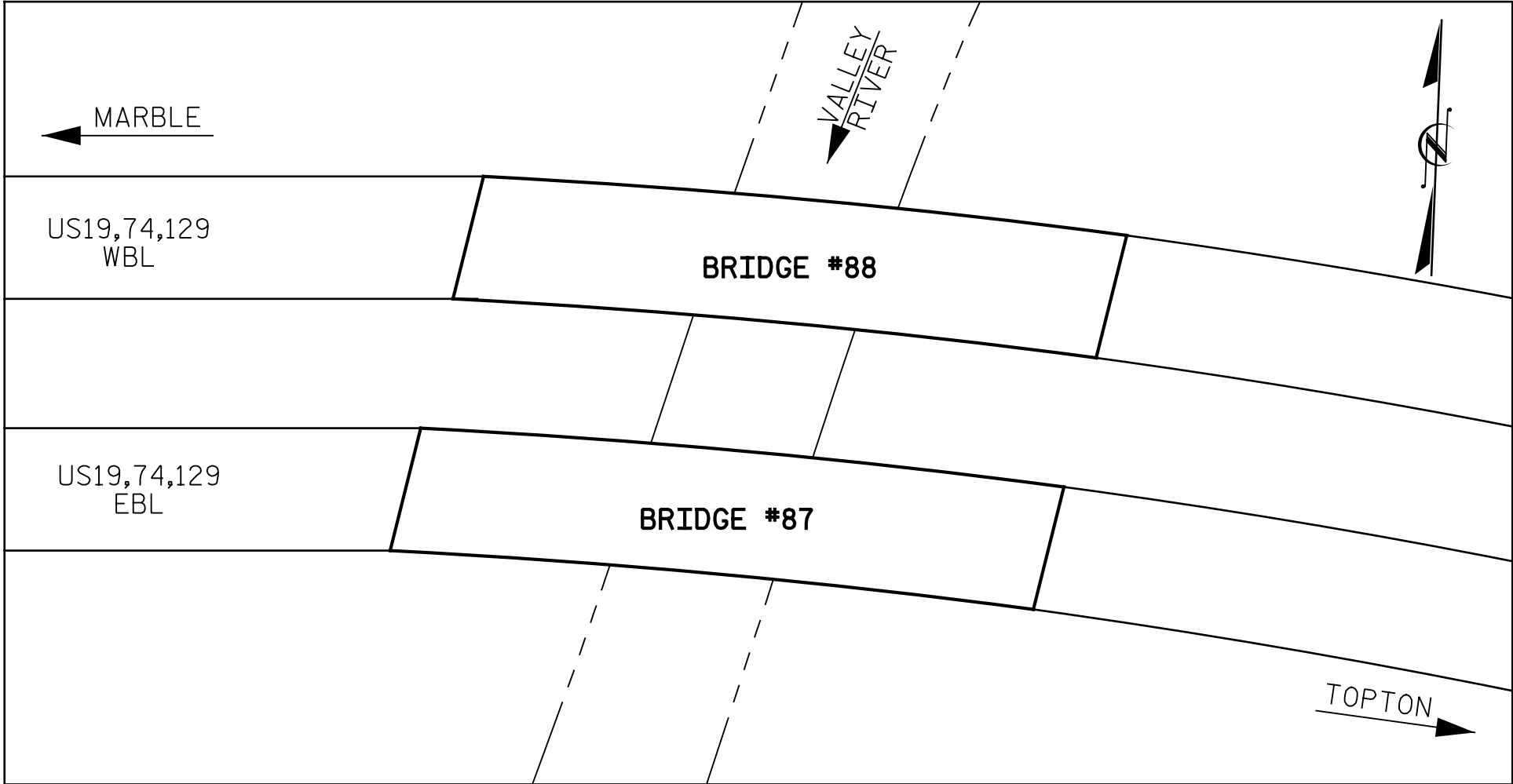
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FINAL UNLESS ALL
SIGNATURES COMPLETED

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
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REVISIONS					SHEET NO. S-4
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS 142					

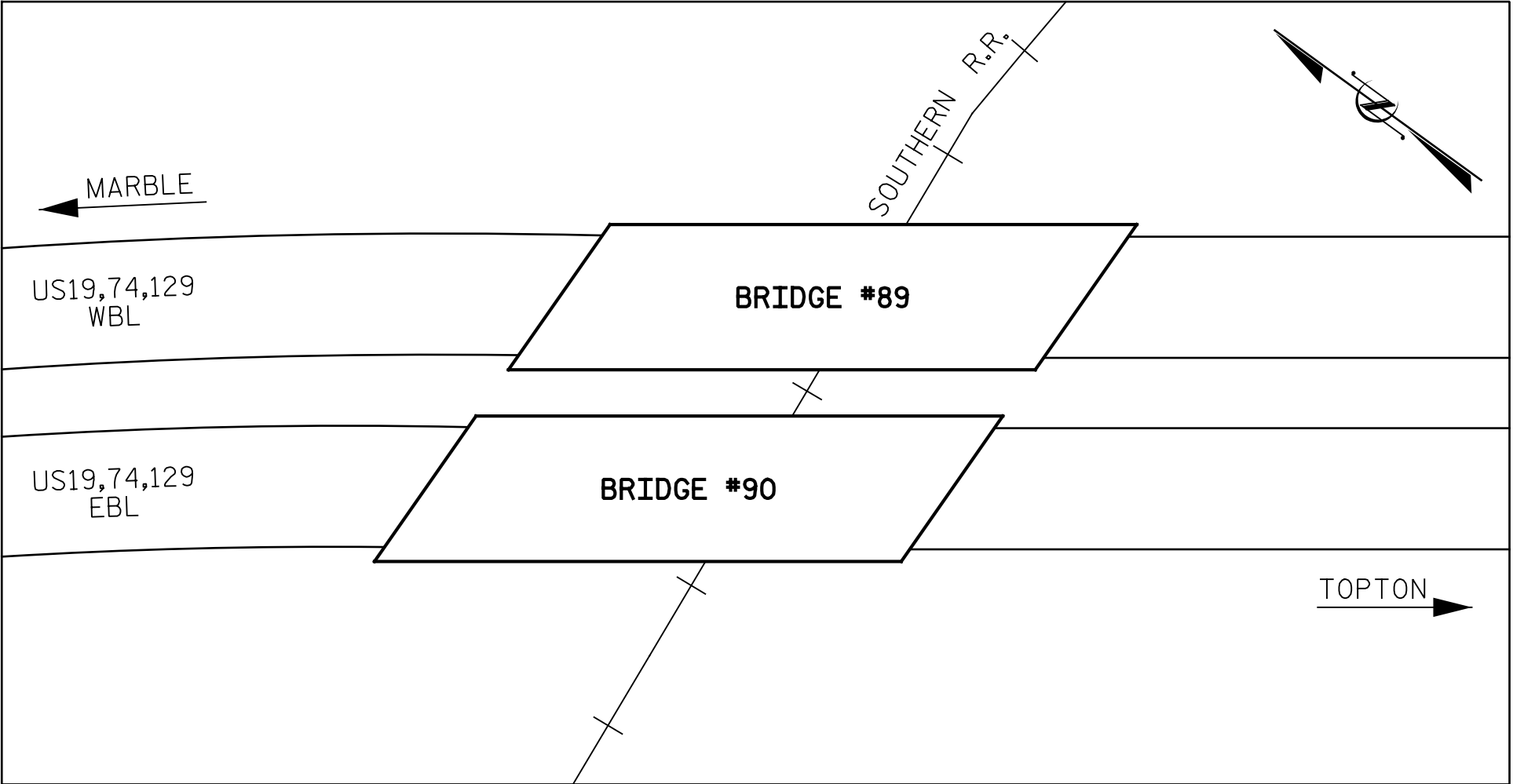
DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018



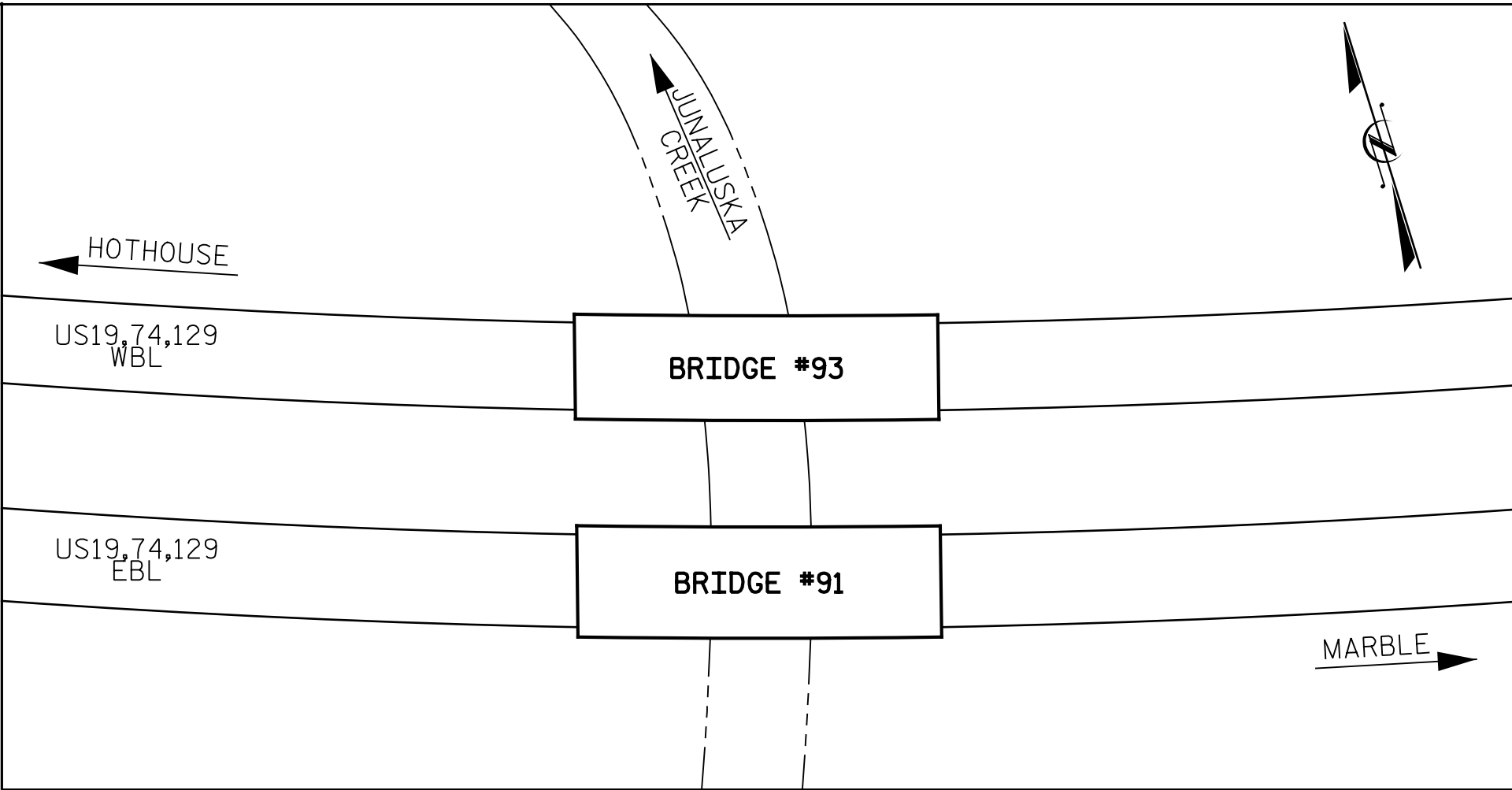
BRIDGE #78



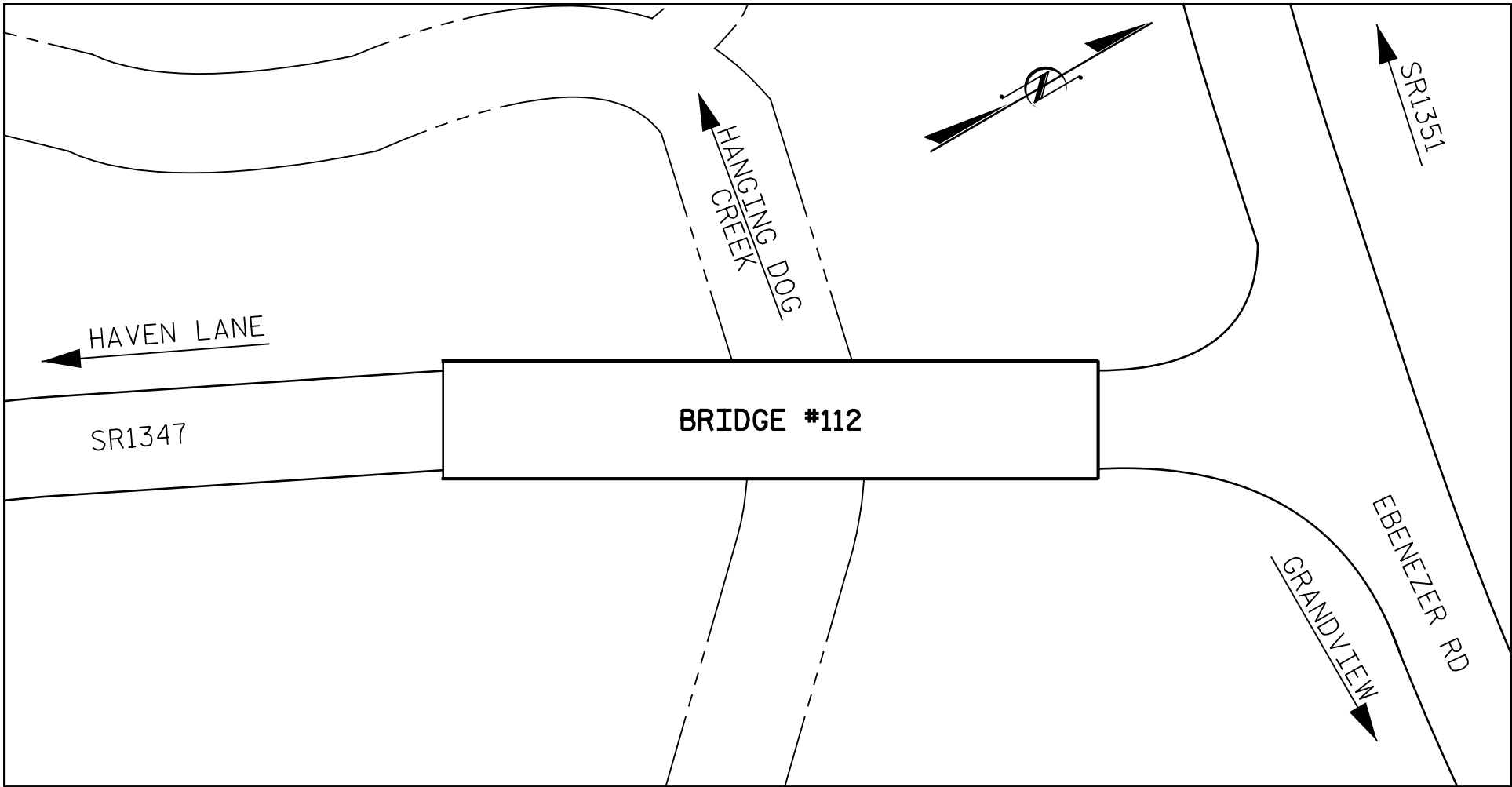
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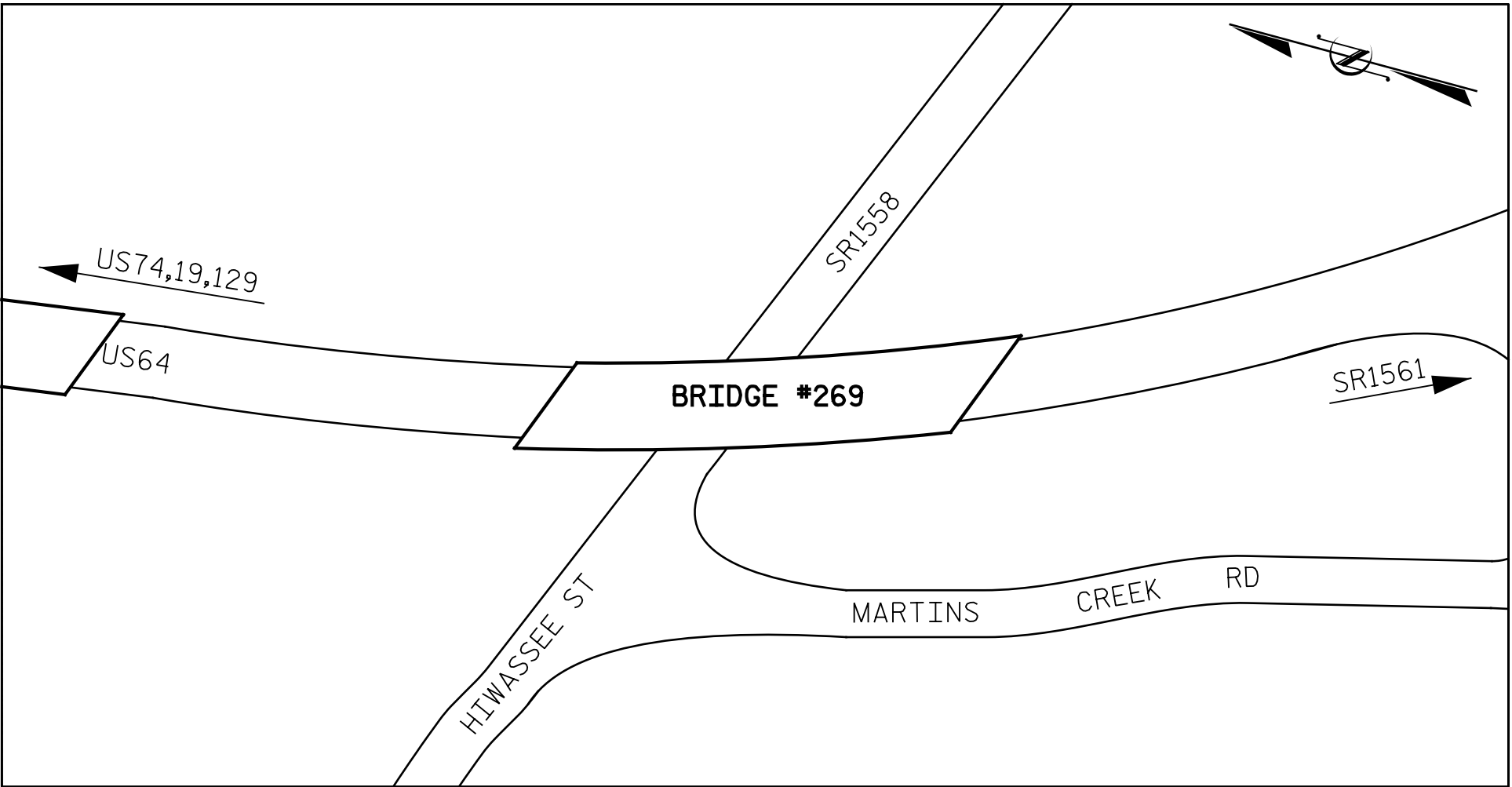
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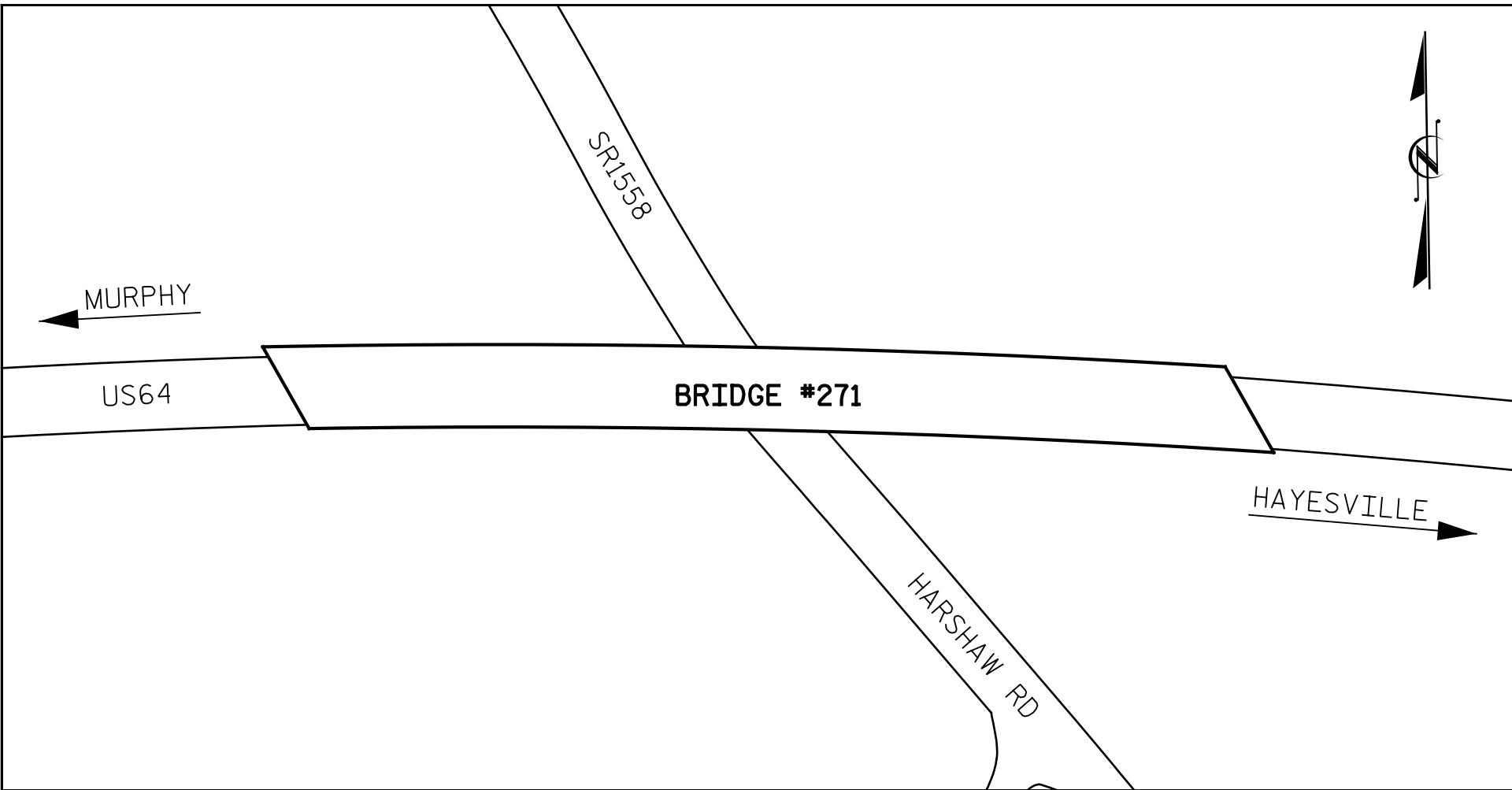
BRIDGE #91 AND #93



BRIDGE #112



BRIDGE #269



BRIDGE #271

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PROJECT NO. 14BPR.3.1
CHEROKEE COUNTY

SHEET 2 OF 2



DocuSigned by:
Eric B. Nelson Jr.
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

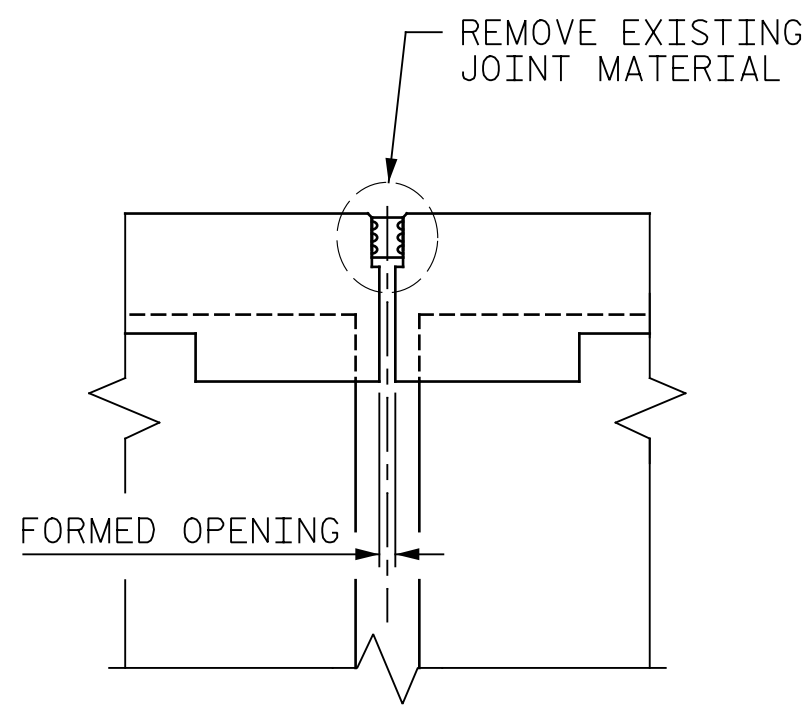
BRIDGE LOCATION SKETCHES

DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

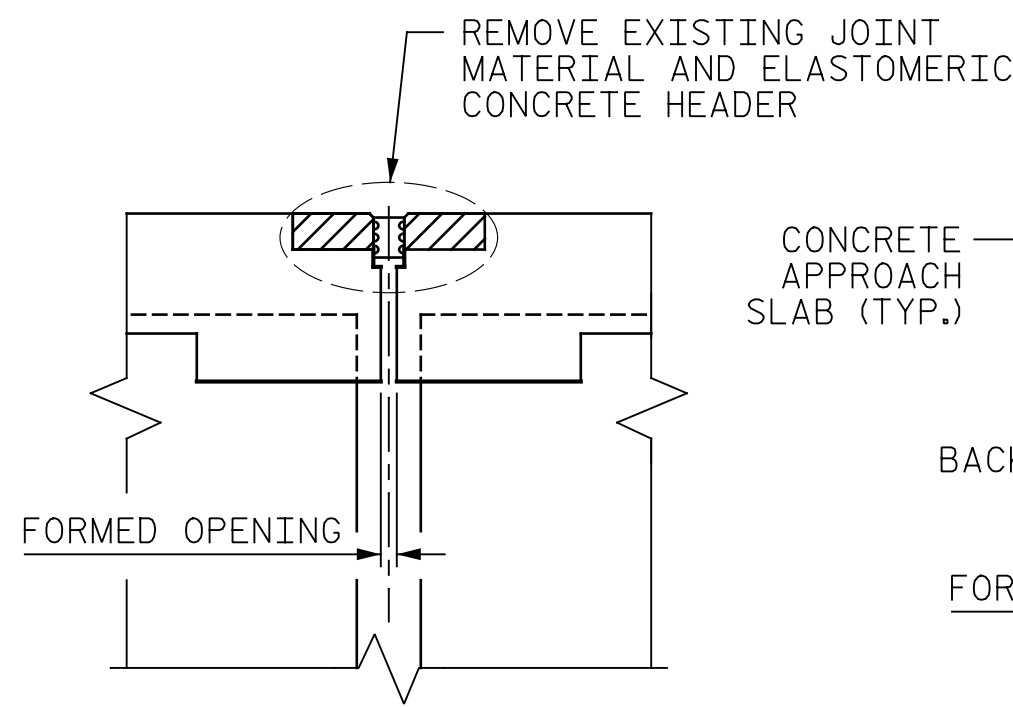
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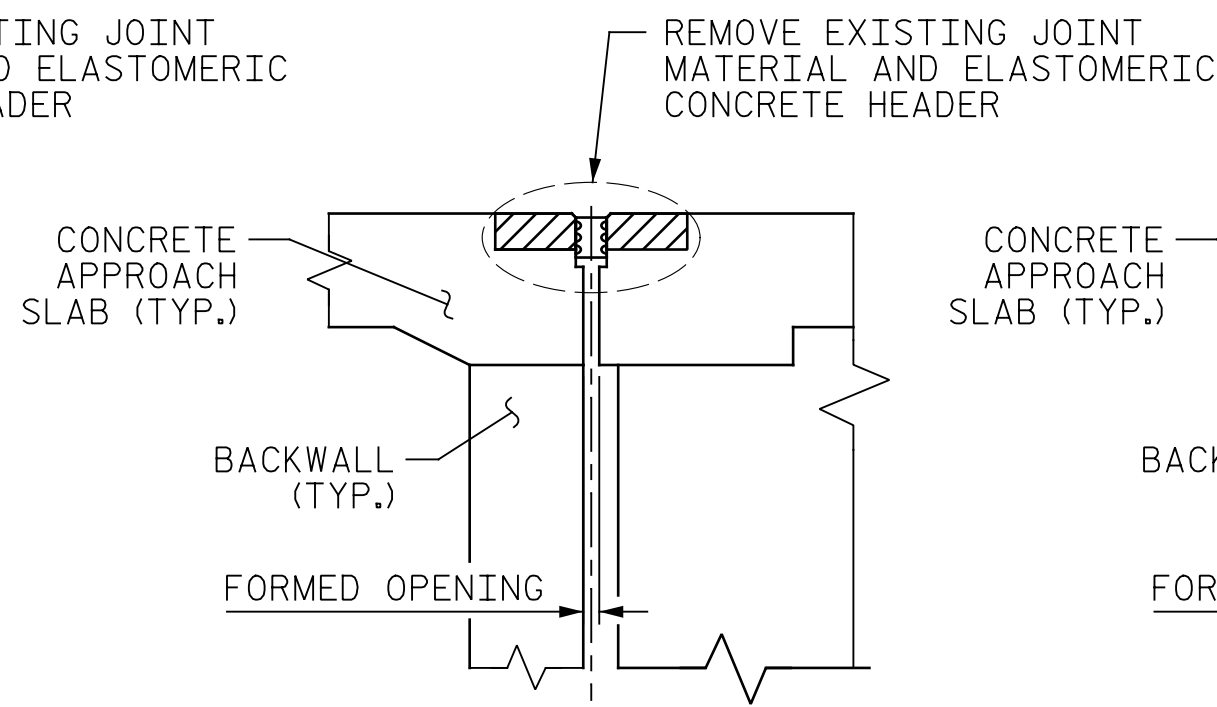
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
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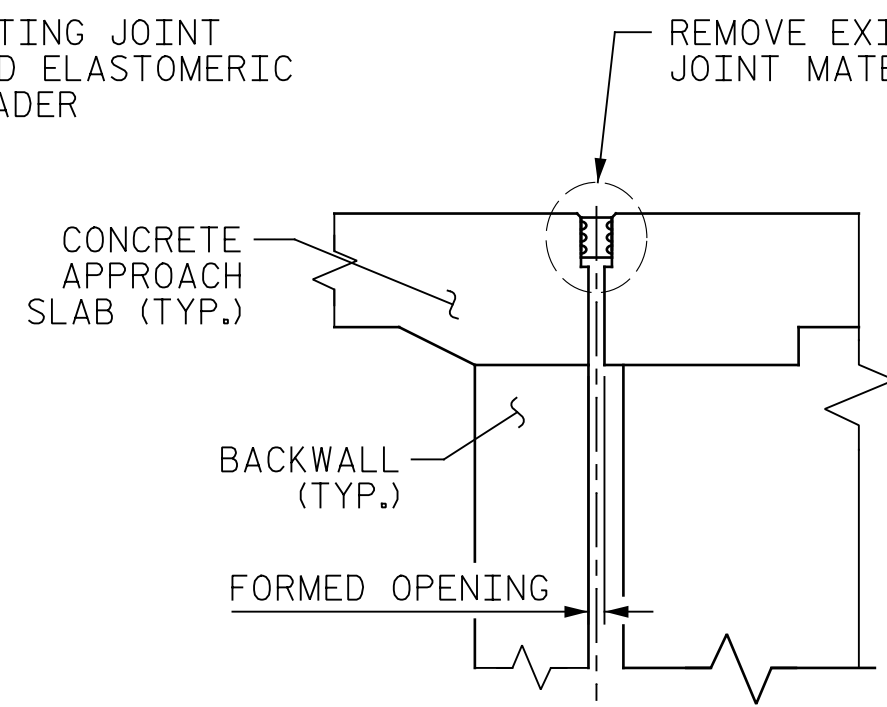
EXISTING JOINT
(FOAM OR COMPRESSED SEAL
WITH NO HEADER) (INT. BENT)



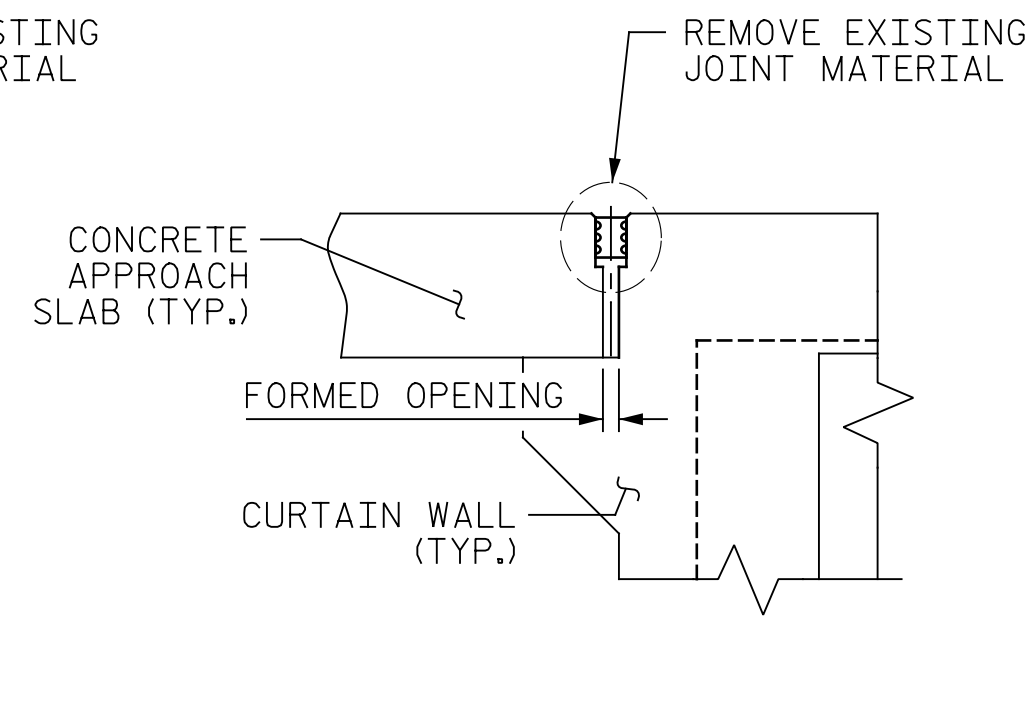
EXISTING JOINT
(FOAM WITH ELASTOMERIC HEADER)
(INT. BENT)



EXISTING JOINT
(FOAM WITH ELASTOMERIC HEADER)
(END BENT)



EXISTING JOINT
(FOAM WITH NO HEADER)
(END BENT)



EXISTING JOINT
(FOAM WITH NO HEADER)
(END BENT)

EXISTING JOINT TYPES

NOTES

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

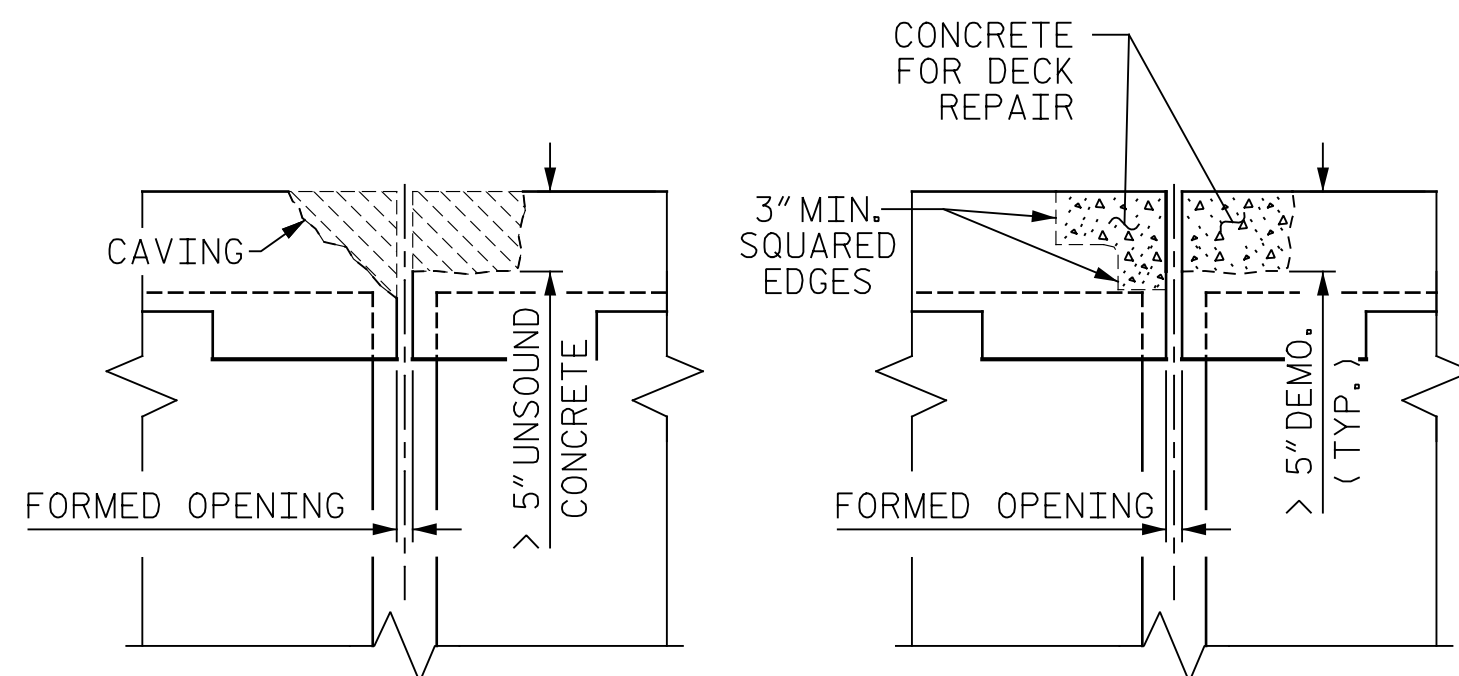
FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT OPENING FOR THE JOINT SEAL IN LIEU OF SAWING.



JOINT DEMOLITION
FOR CAVING OR
UNBOUND CONCRETE

REPAIRED JOINT

CONCRETE FOR DECK REPAIR DETAIL

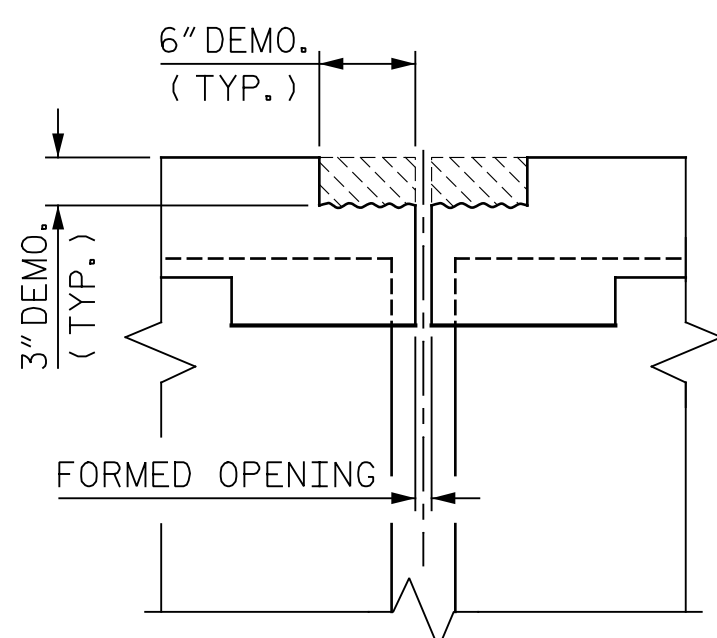
(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

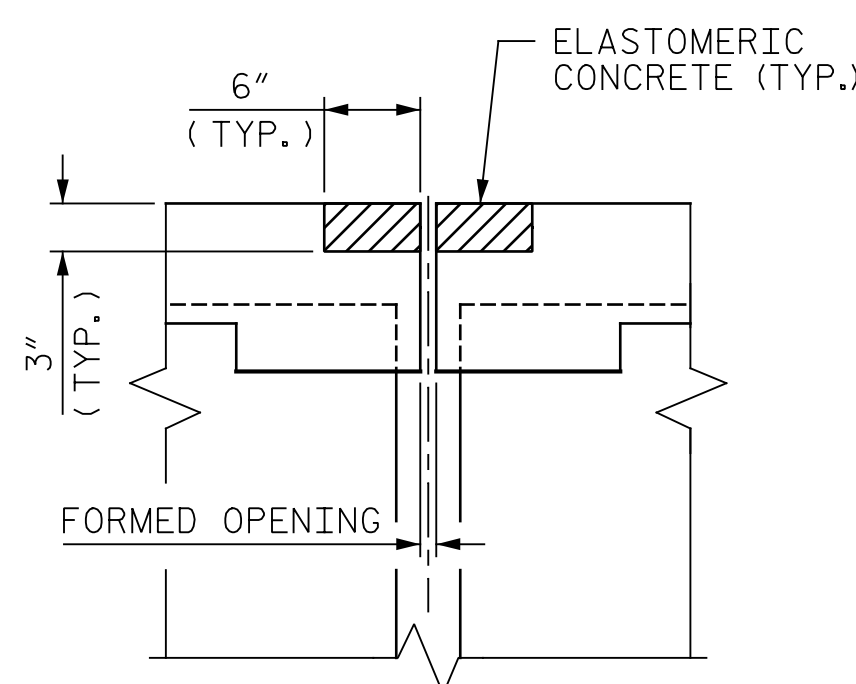
FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK.

DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

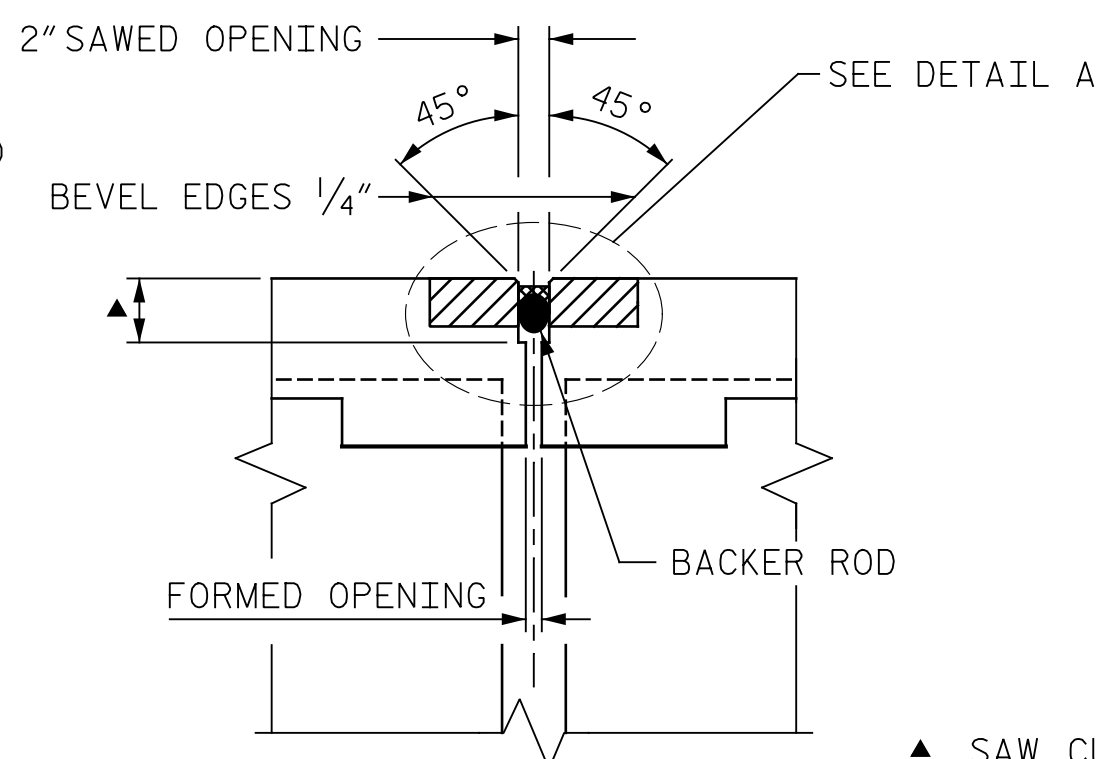
THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.



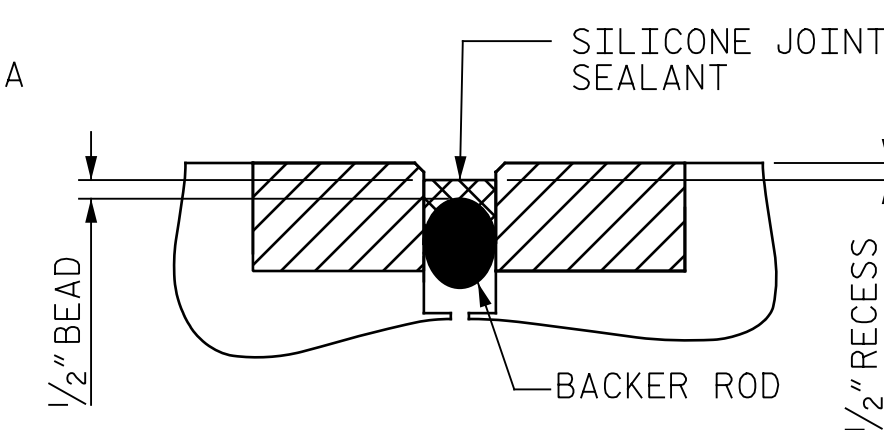
MINIMUM
JOINT DEMOLITION



PROPOSED JOINT
PRE-SAWED DIMENSIONS

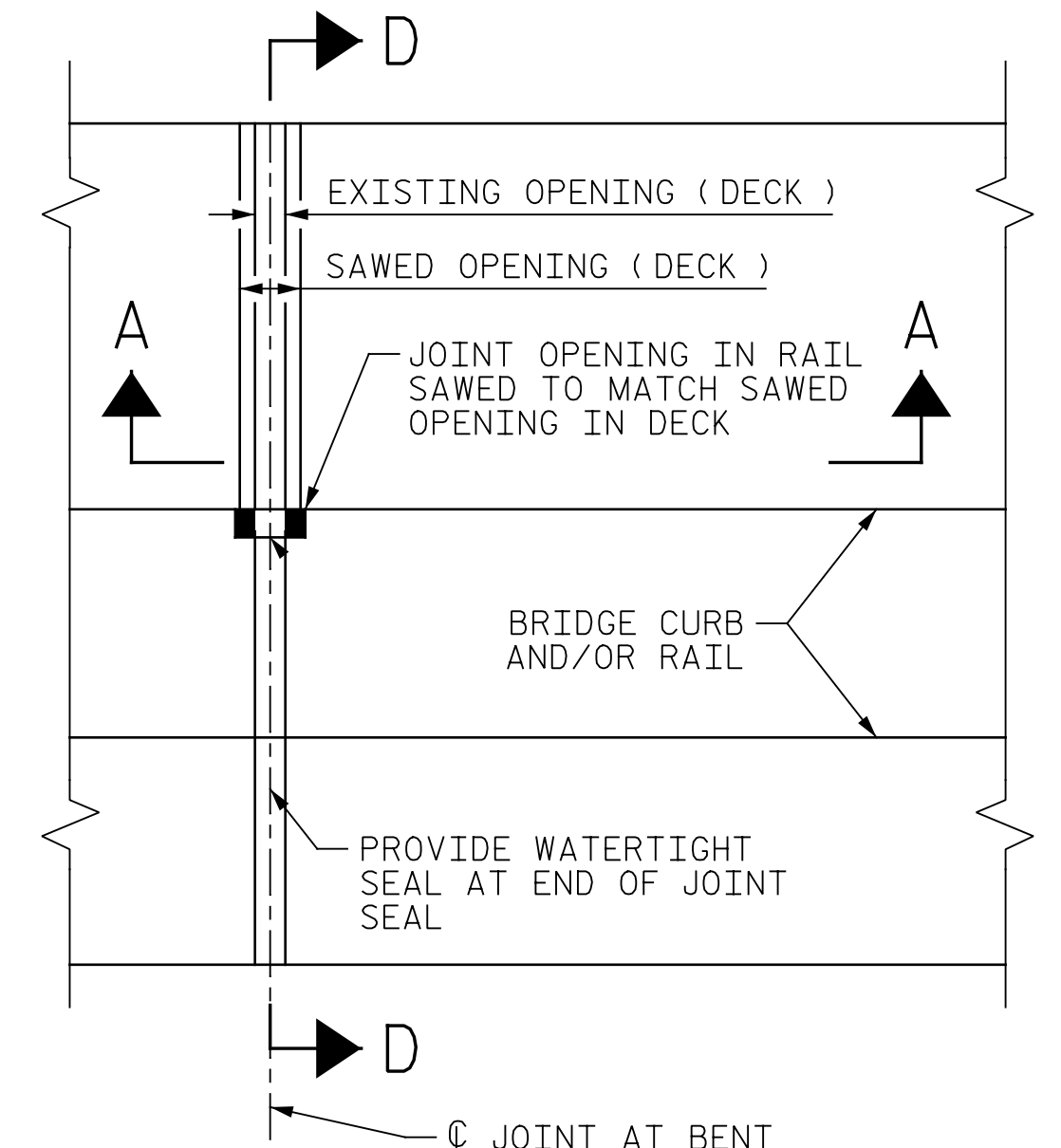


PROPOSED SILICONE
JOINT SEAL



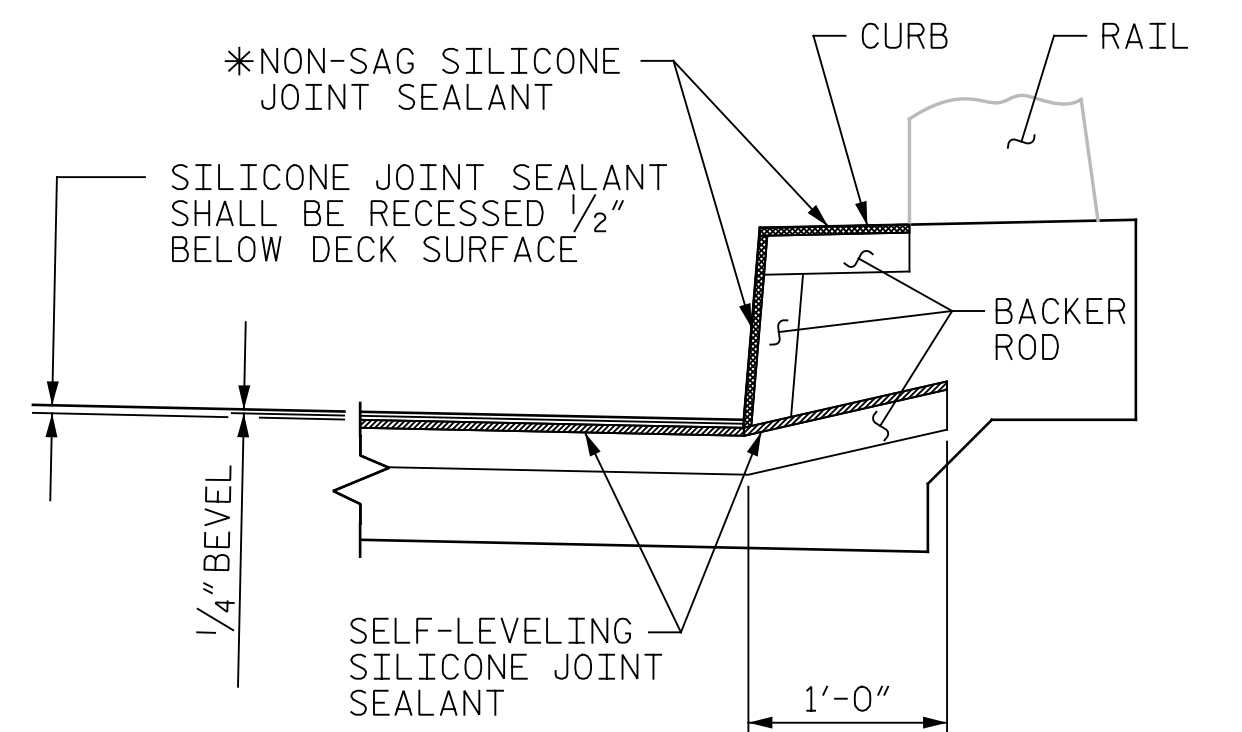
DETAIL A

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS



PLAN

*SELF LEVELING SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.

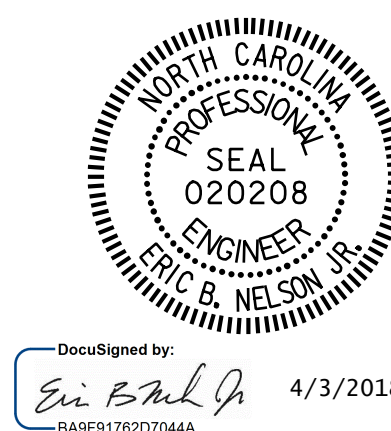


SECTION D-D

JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
CHEROKEE COUNTY
BRIDGE NO. 50, 55, 71, 78, 87, 88, 89, 90, 91, 93, 269

SHEET 1 OF 2



DocuSigned by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAIL FOR
SILICONE JOINT SEAL
WITH ELASTOMERIC
HEADER

REVISIONS						SHEET NO. S-6
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

(INTERIOR BENT SHOWN,
END BENTS ARE SIMILAR)

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

	SILICONE JOINT SEAL (LF)				ELASTOMERIC CONCRETE (CF) / HEADER DIMENSIONS (WIDTH X DEPTH)								JOINT DEMOLITION (SF)				CONCRETE FOR DECK REPAIR (CF)			
BRIDGE NO.	EB 1	BENT 1	BENT 2	EB 2	EB 1	DIM.	BENT 1	DIM.	BENT 2	DIM.	EB 2	DIM.	EB 1	BENT 1	BENT 2	EB 2	EB 1	BENT 1	BENT 2	EB 2
190050	51.3	51.3	51.3	51.3	12.3	(2) 6"X3"	12.3	(2) 6"X3"	12.3	(2) 6"X3"	12.3	(2) 6"X3"	48.3	48.3	48.3	48.3	-	-	-	-
190055	75.8	-	-	75.8	18.2	(2) 6"X3"	-	-	-	-	18.2	(2) 6"X3"	72.8	-	-	72.8	-	-	-	-
190071	57.6	59.6	59.6	57.6	14.1	(2) 6"X3"	14.1	(2) 6"X3"	14.1	(2) 6"X3"	14.1	(2) 6"X3"	56.6	56.6	56.6	56.6	-	-	-	-
190078	-	35.4	35.4	-	-	-	8.1	(2) 6"X3"	8.1	(2) 6"X3"	-	-	-	32.4	32.4	-	-	-	-	-
190087	-	44.2	44.2	-	-	-	10.3	(2) 6"X3"	10.3	(2) 6"X3"	-	-	-	41.2	41.2	-	-	-	-	-
190088	-	44.2	44.2	-	-	-	10.3	(2) 6"X3"	10.3	(2) 6"X3"	-	-	-	41.2	41.2	-	-	-	-	-
190089	-	50.7	50.7	-	-	-	11.9	(2) 6"X3"	11.9	(2) 6"X3"	-	-	-	47.7	47.7	-	-	-	-	-
190090	-	50.7	50.7	-	-	-	11.9	(2) 6"X3"	11.9	(2) 6"X3"	-	-	-	47.7	47.7	-	-	-	-	-
190091	-	43.0	43.0	-	-	-	10.0	(2) 6"X3"	10.0	(2) 6"X3"	-	-	-	40.0	40.0	-	-	-	-	-
190093	-	43.0	43.0	-	-	-	10.0	(2) 6"X3"	10.0	(2) 6"X3"	-	-	-	40.0	40.0	-	-	-	-	-
190269	-	-	-	58.8	-	-	-	-	-	-	14.0	(2) 6"X3"	-	-	-	55.8	-	-	-	-

PROJECT NO. 14BPR.3.1

CHEROKEE COUNTY

BRIDGE NO. 50, 55, 71, 78, 87, 88, 89, 90, 91, 93, 269

SHEET 2 OF 2



DocuSigned by:
Eric B. Nelson 4/3/2018

BA9F91762D7D44A...

DRAWN BY : M. LEE DATE : 2/2018

CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:

Gannett Fleming
Excellence Delivered *As Promised*

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

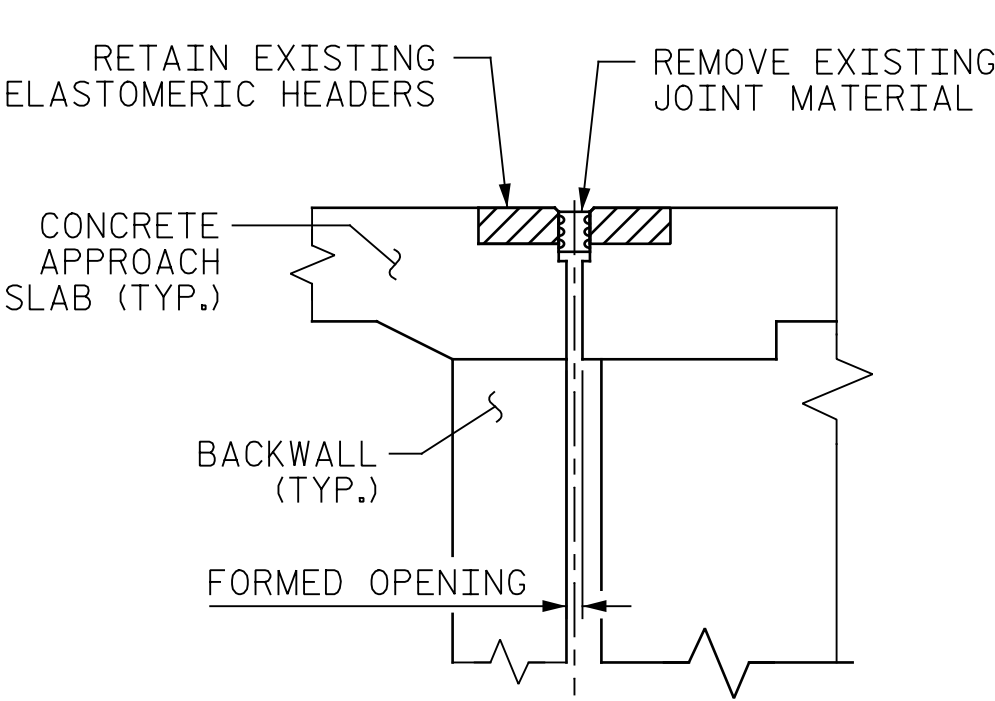
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAIL FOR
SILICONE JOINT SEAL
WITH ELASTOMERIC
HEADER

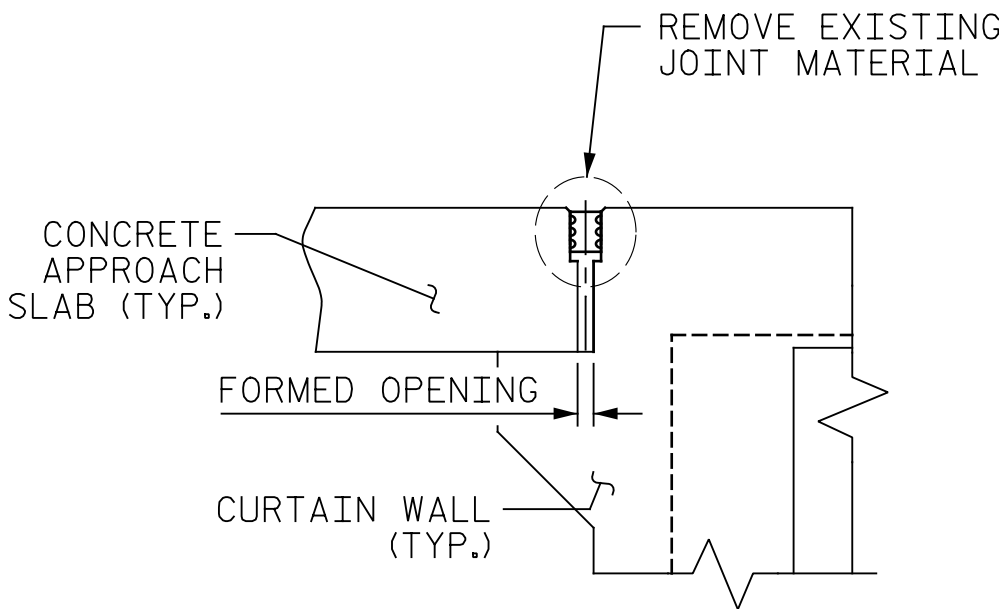
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-7
1			3			TOTAL SHEETS 142
2			4			

NOTES

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

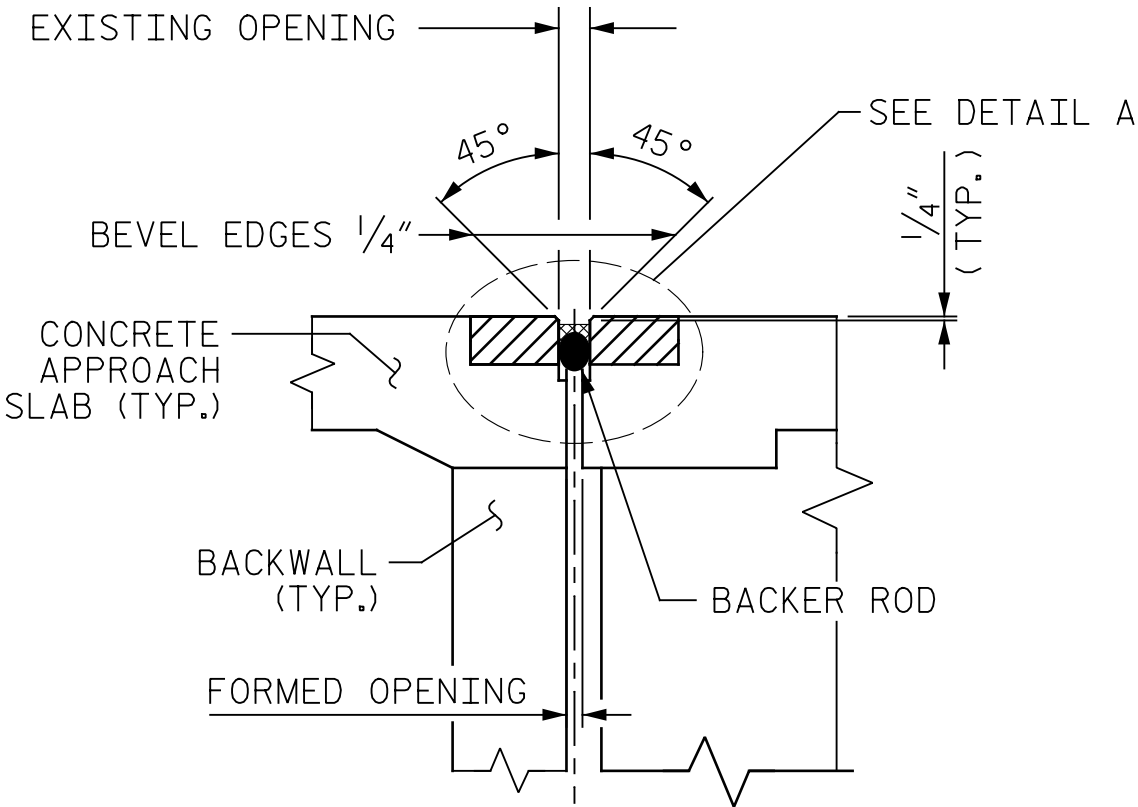


EXISTING JOINT
(FOAM WITH ELASTOMERIC HEADER)
(190269, 190271)

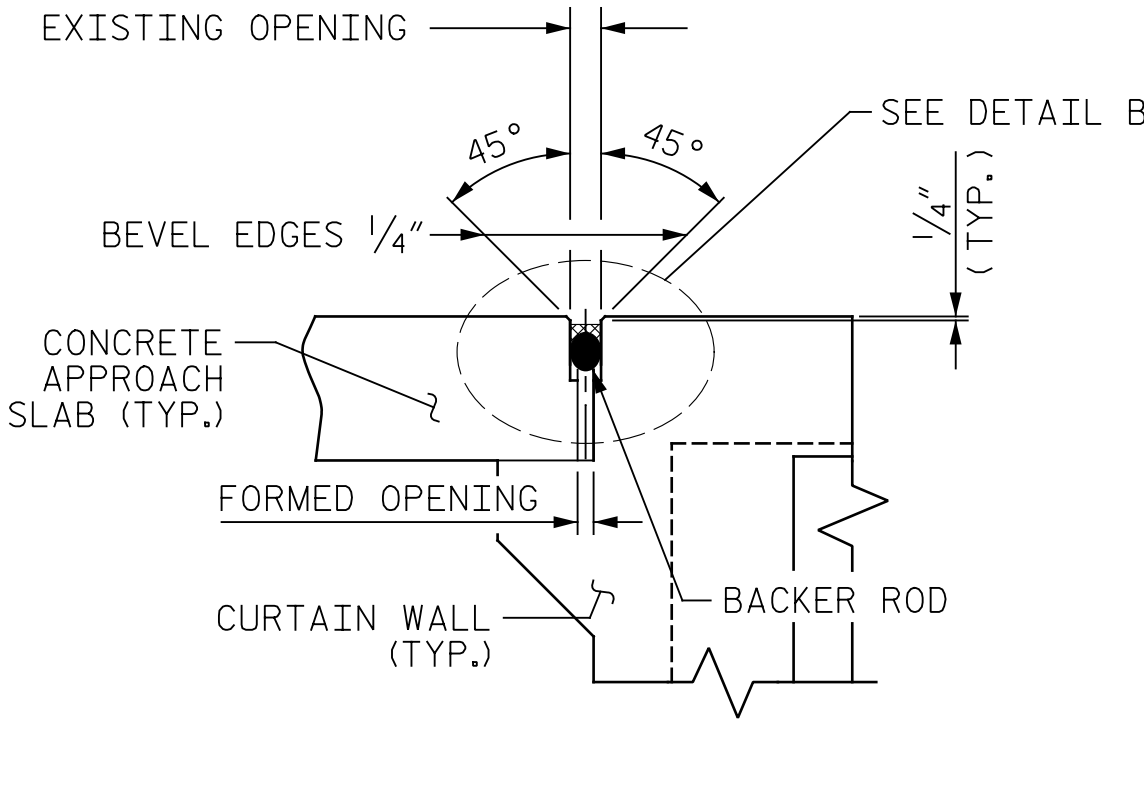


EXISTING JOINT
(FOAM WITH NO HEADER)
(190078, 190087, 190088, 190089,
190090, 190091, 190093)

EXISTING JOINT TYPES



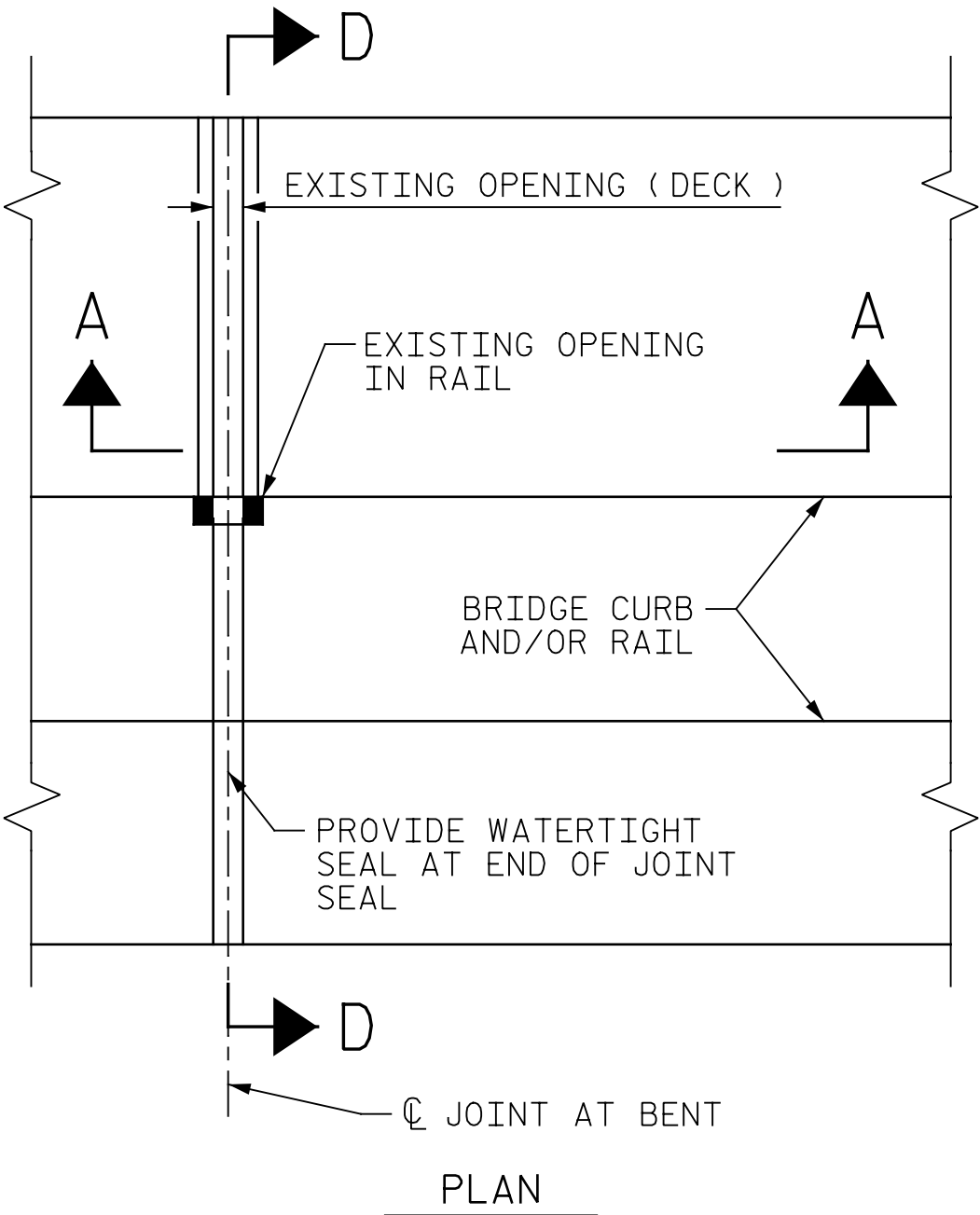
PROPOSED SILICONE
JOINT SEAL
(190269, 190271)



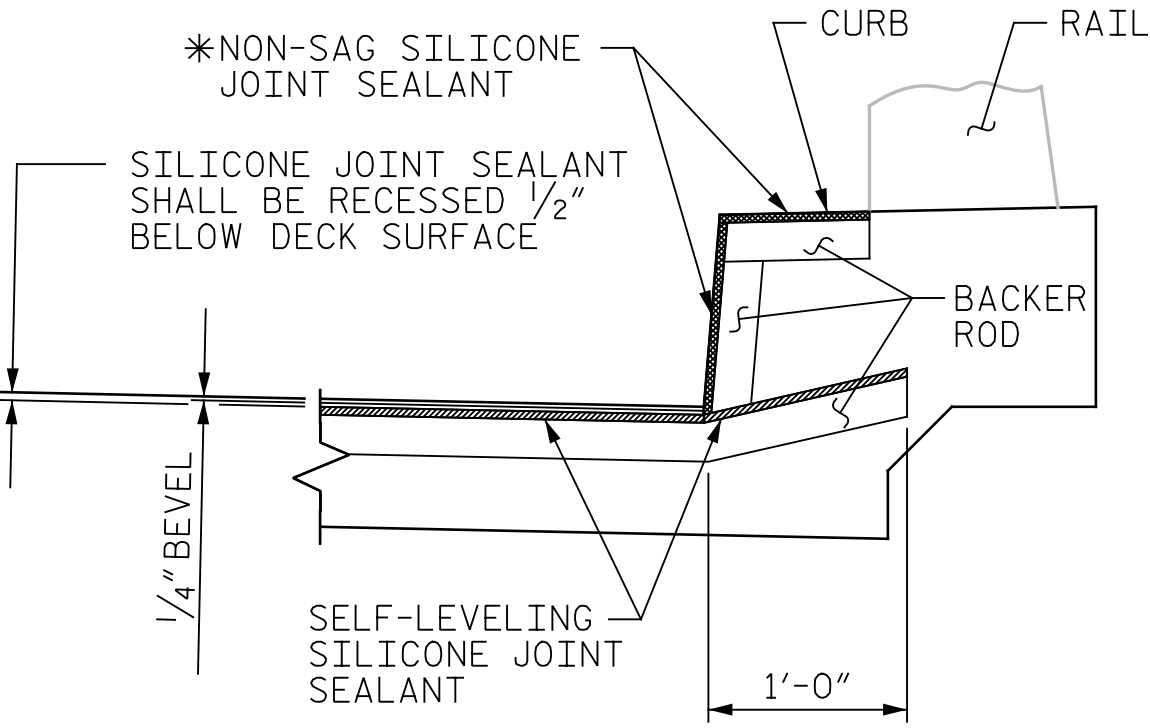
PROPOSED SILICONE
JOINT SEAL
(190078, 190087, 190088, 190089,
190090, 190091, 190093)

SECTION A-A
PROPOSED JOINT

BRIDGE NO.	SILICONE JOINT SEAL (LF)			
	EB 1	BENT 1	BENT 2	EB 2
190078	33.4	-	-	33.4
190087	42.2	-	-	42.2
190088	42.2	-	-	42.2
190089	48.7	-	-	48.7
190090	48.7	-	-	48.7
190091	41.0	-	-	41.0
190093	41.0	-	-	41.0
190269	58.8	-	-	-
190271	49.0	-	-	-

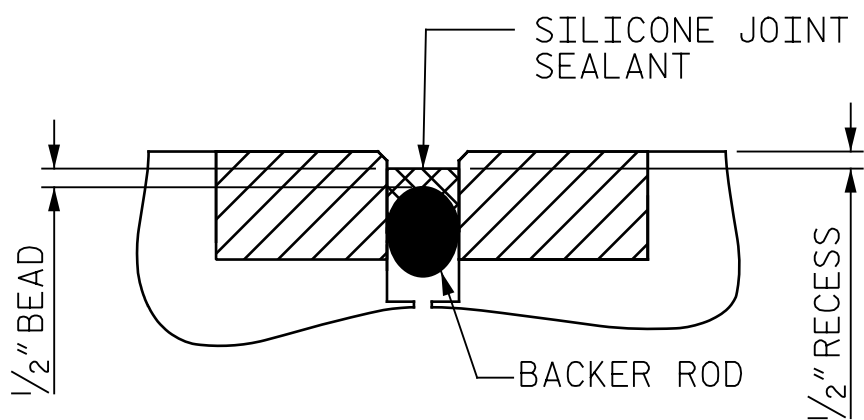


*SELF LEVELING SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.

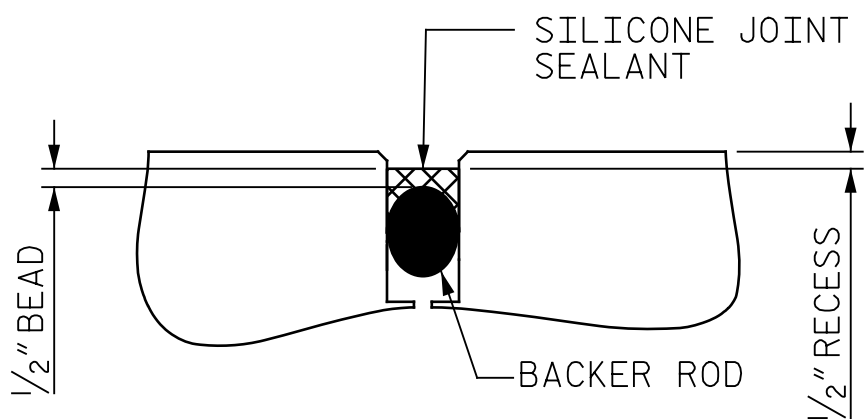


SECTION D-D

JOINT SEAL DETAILS AT BENT



DETAIL A



DETAIL B

PROJECT NO. 14BPR.3.1
CHEROKEE COUNTY
BRIDGE NO. 78, 87, 88, 89,
90, 91, 93, 269,
271



Designed by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAIL
FOR SILICONE
JOINT SEAL

REVISIONS						SHEET NO. S-8
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

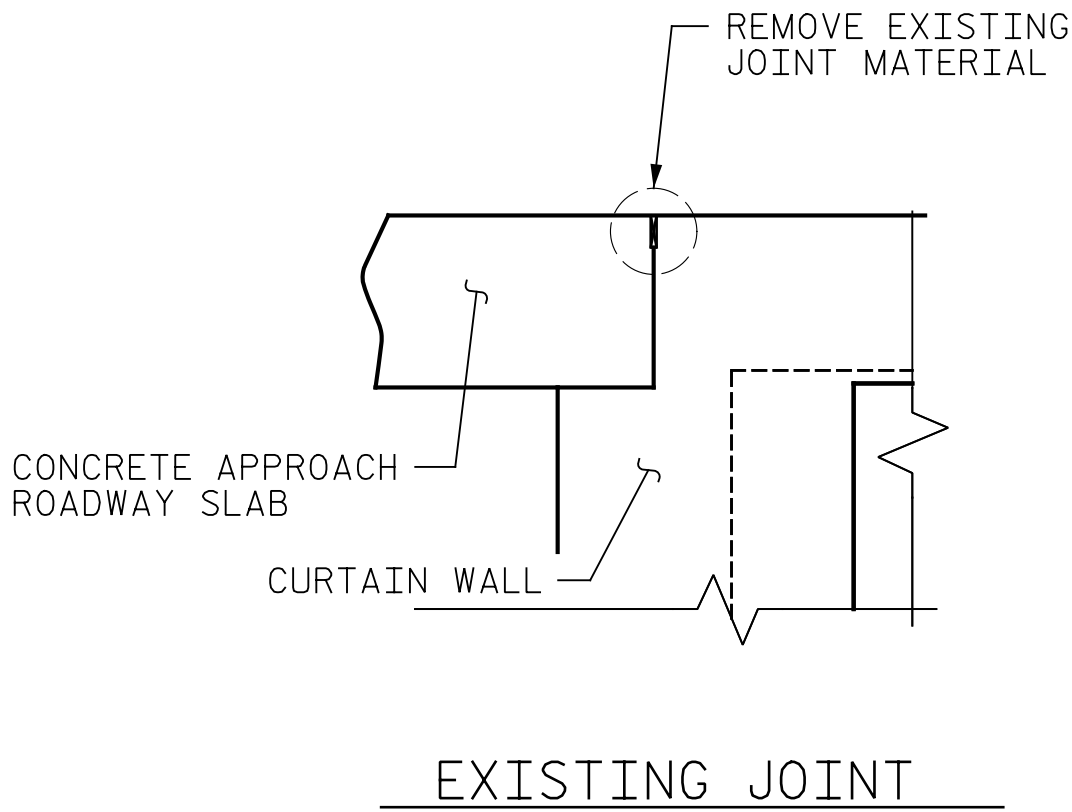
DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

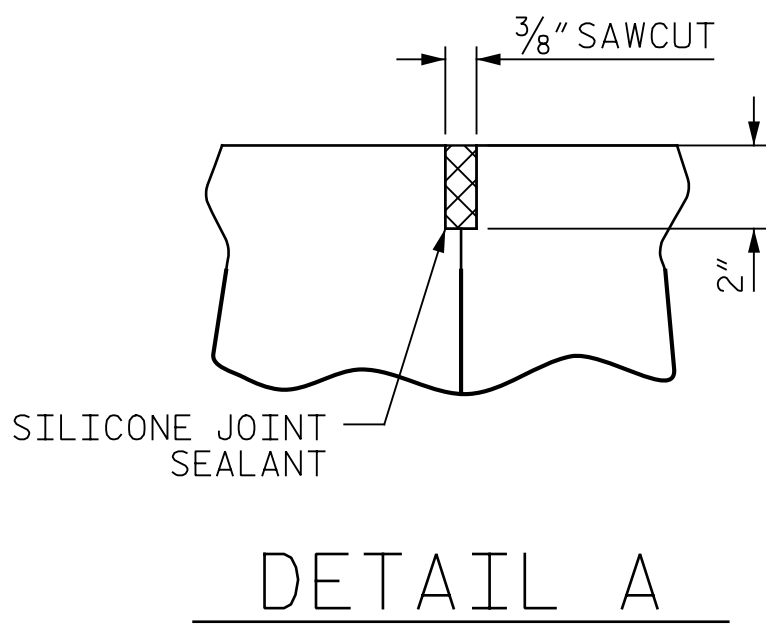
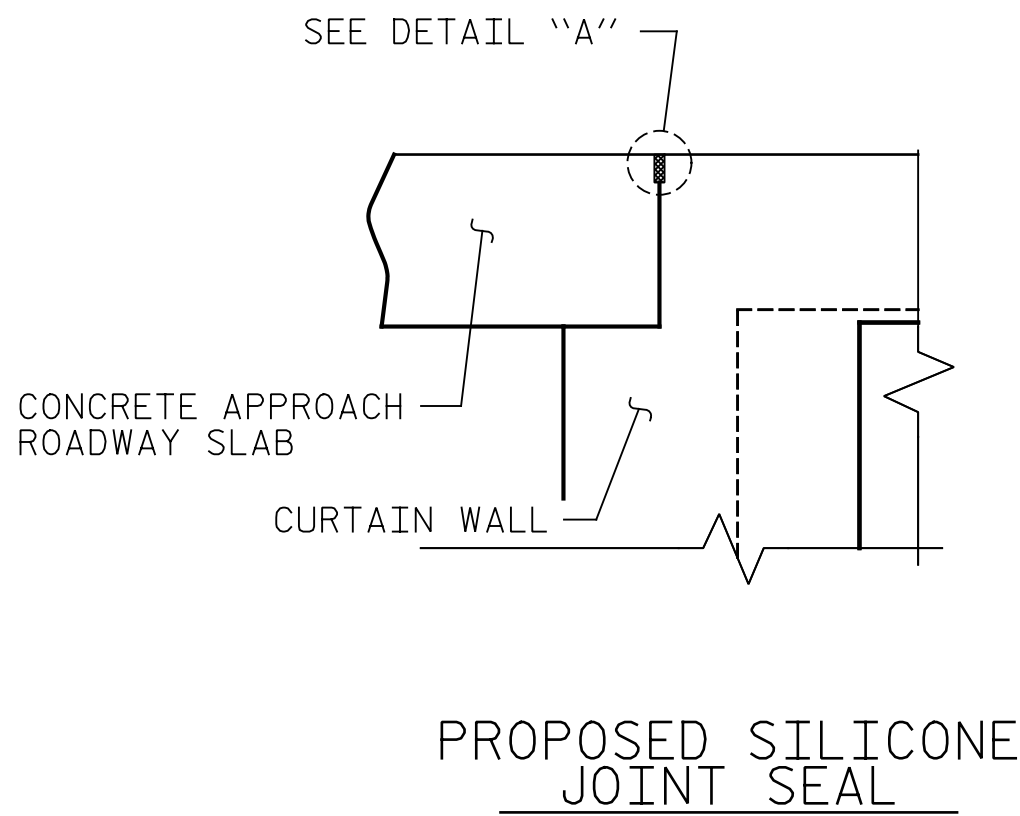
NOTES

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.



EXISTING JOINT TYPES

	SILICONE JOINT SEAL (LF)			
BRIDGE NO.	EB 1	BENT 1	BENT 2	EB 2
190112	24.0	-	-	24.0



PROJECT NO. 14BPR.3.1
CHEROKEE COUNTY
BRIDGE NO. 112

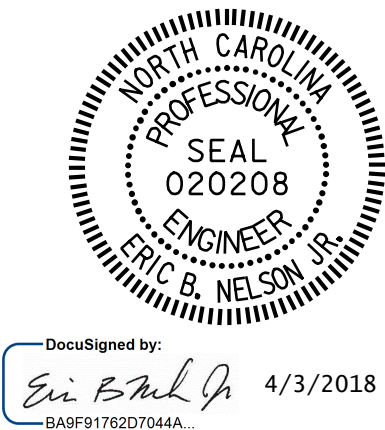
SECTION A-A
PROPOSED JOINT

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-9	
JOINT DETAIL FOR SILICONE JOINT SEAL & CONSTRUCTION JOINTS						TOTAL SHEETS 142	
REVISIONS							
NO.	BY:	DATE:	NO.	BY:	DATE:		
1			3				
2			4				



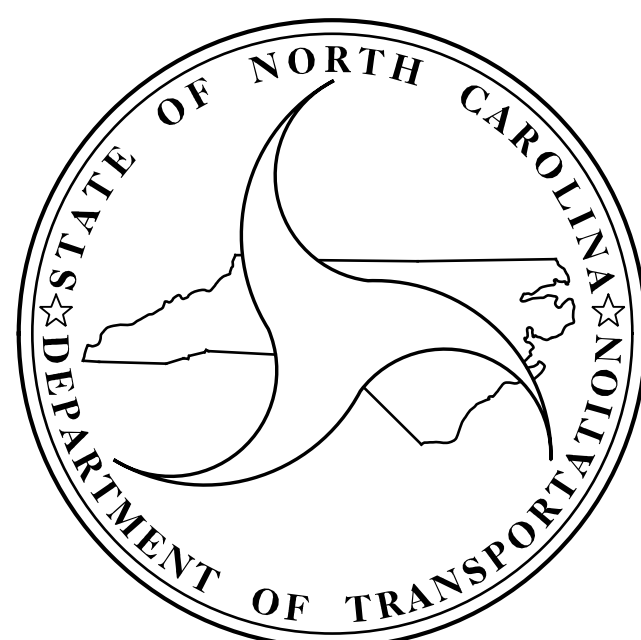
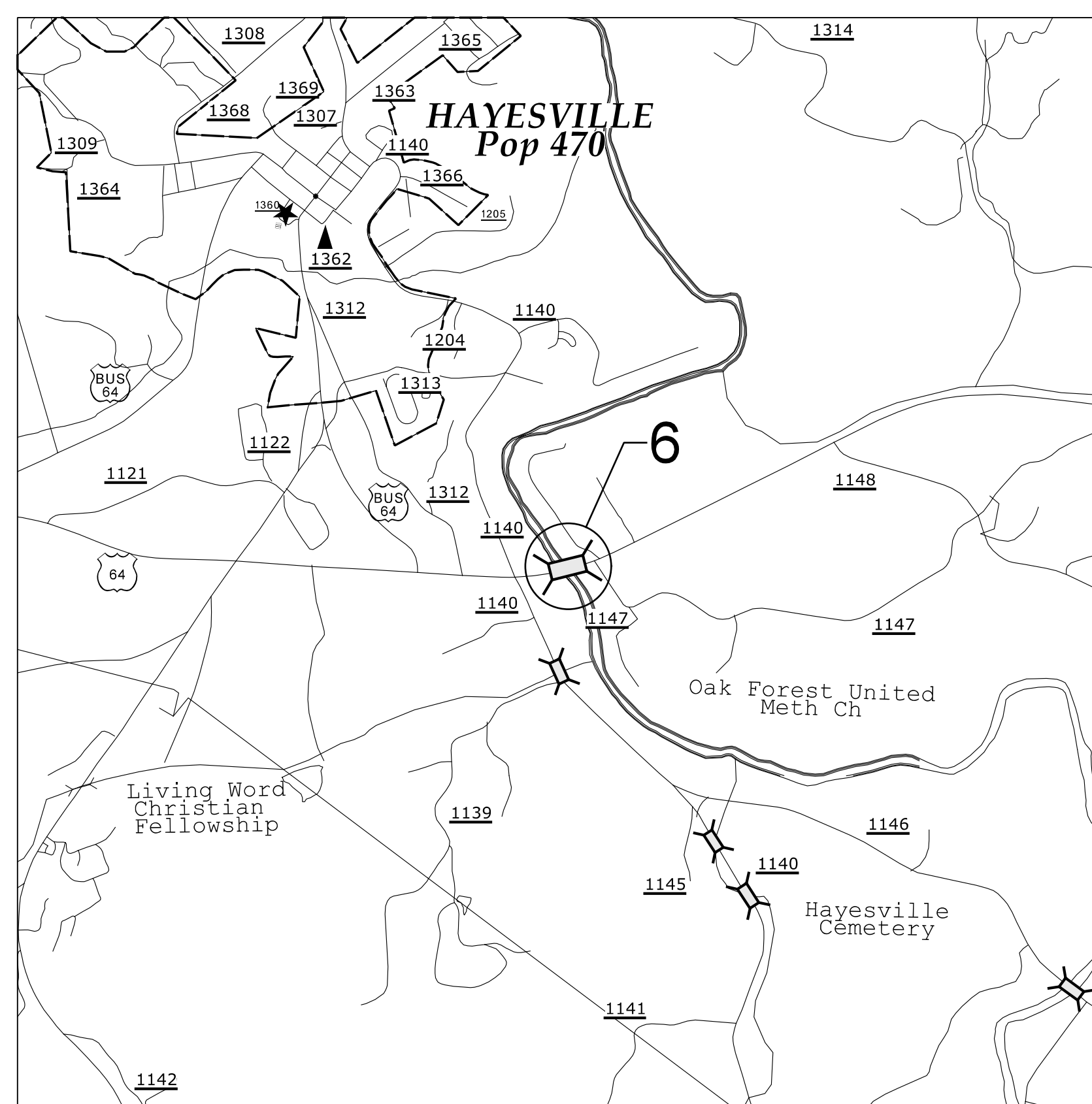
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-10

CLAY COUNTY

LOCATION: **CLAY COUNTY:**

BRIDGE #006 ON US64 OVER HIWASSEE RIVER

TYPE OF WORK: *BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENT*



DESIGN DATA
CLAY COUNTY
#006 ADT 2013 = 9,400

PROJECT LENGTH
CLAY COUNTY
#006 = 0.040 MILE

PLANS PREPARED BY:



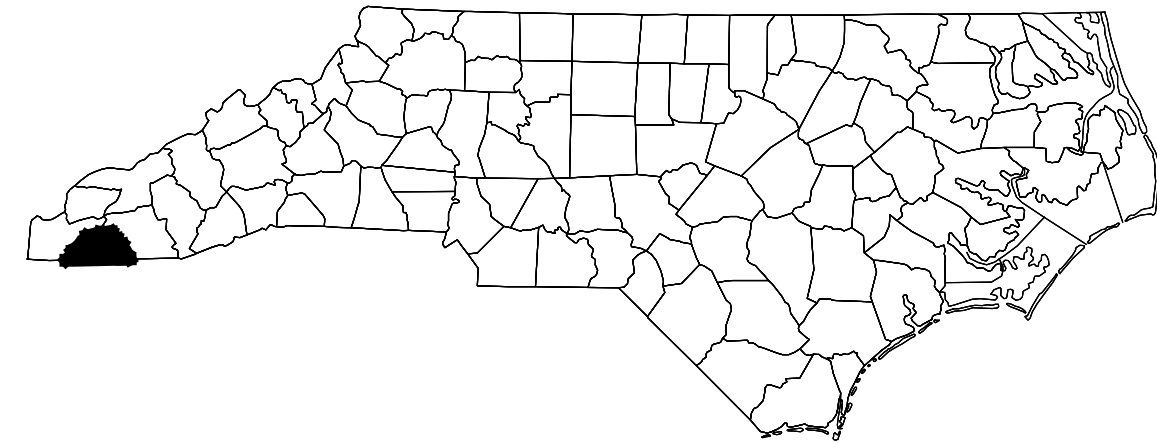
Gannett Fleming
Excellence Delivered **As Promised**

**2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660**

NC Lic. No. F-0270

DocuSigned by:
Eric B. Mel...
BA9F91762D7044A...
4/3/2018





STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-11

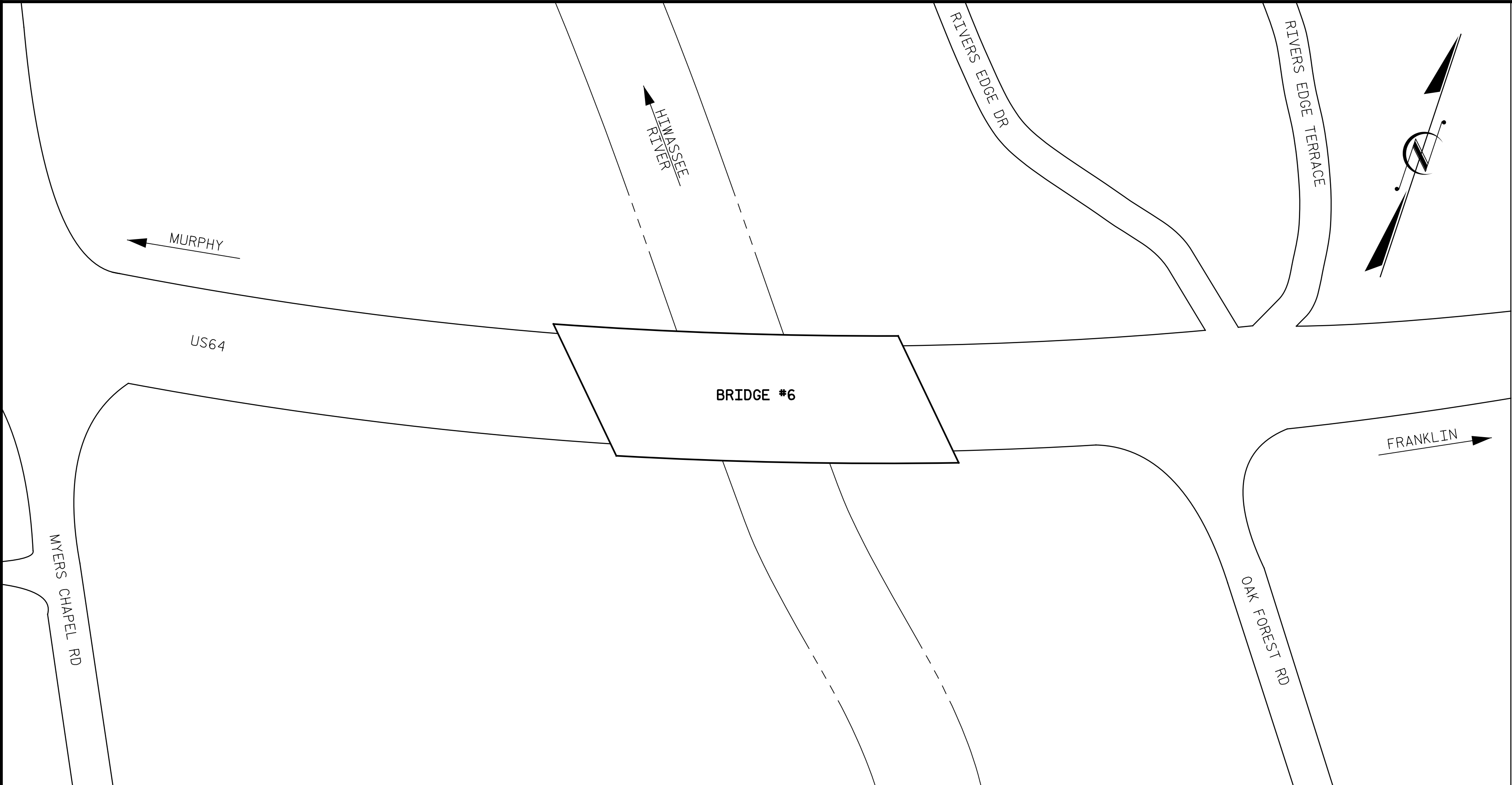
CLAY COUNTY

LOCATION: CLAY COUNTY:
BRIDGE #006 ON US64 OVER HIWASSEE RIVER

TYPE OF WORK: BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENT

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
S-10	TITLE SHEET
S-11	INDEX OF SHEETS
S-12 THRU S-13	STRUCTURAL PLANS – JOINT REPLACEMENT



GENERAL NOTES

- EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBLTY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

LOCATION SKETCH

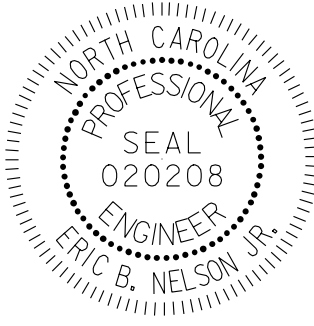
INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

BILL OF MATERIAL FOR CLAY COUNTY

	VOLUMETRIC MIXER	FOAM JOINT SEAL	* CONCRETE FOR DECK REPAIR	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION
	LUMP SUM	LN. FT.	CU. FT.	CU. FT.	SQ. FT.
210006	LUMP SUM	188.8	-	46.2	184.8
TOTAL	LUMP SUM	188.8	-	46.2	184.8

* ESTIMATED QUANTITY FOR BIDDING PURPOSES.

PROJECT NO. 14BPR.3.1
CLAY COUNTY



DocuSigned by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BILL OF MATERIAL
& BRIDGE LOCATION
SKETCHES

DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO. S-12
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

NOTES

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

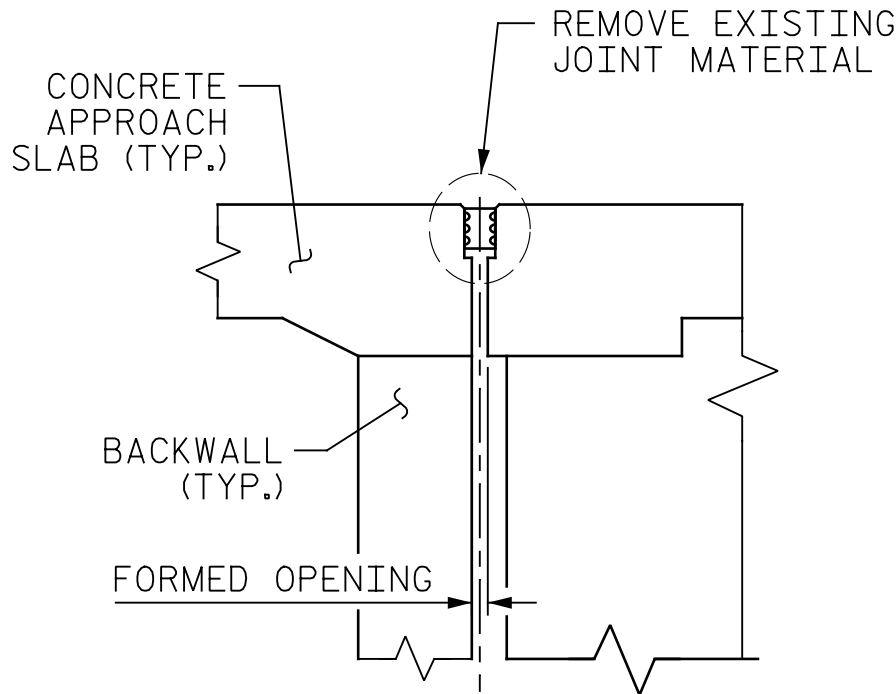
FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

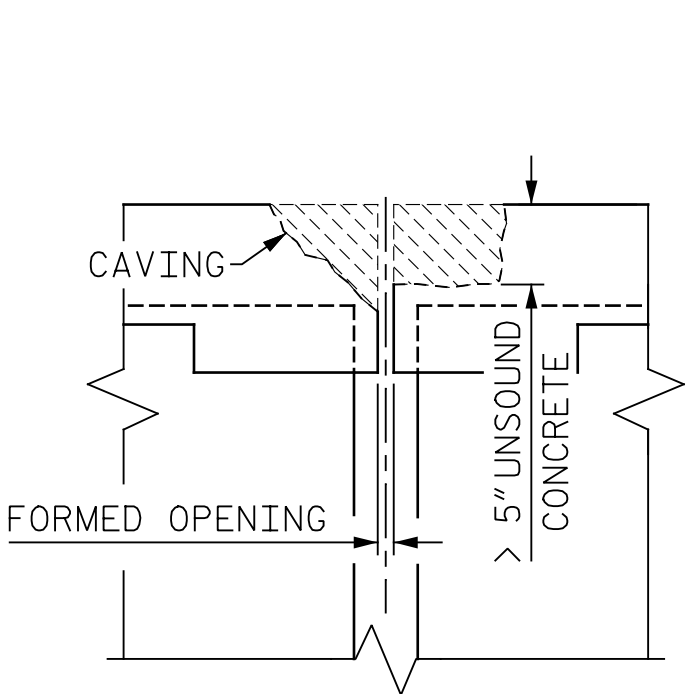
THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT OPENING FOR THE JOINT SEAL IN LIEU OF SAWING.

THE NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2" AT END BENT 1 AND END BENT 2.

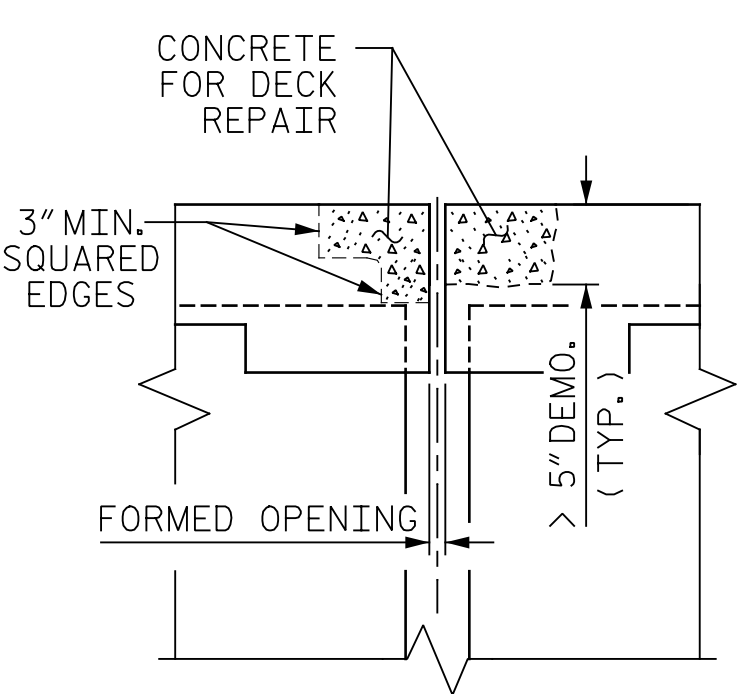


EXISTING JOINT
(FOAM SEAL WITH NO HEADER)

EXISTING JOINT TYPES



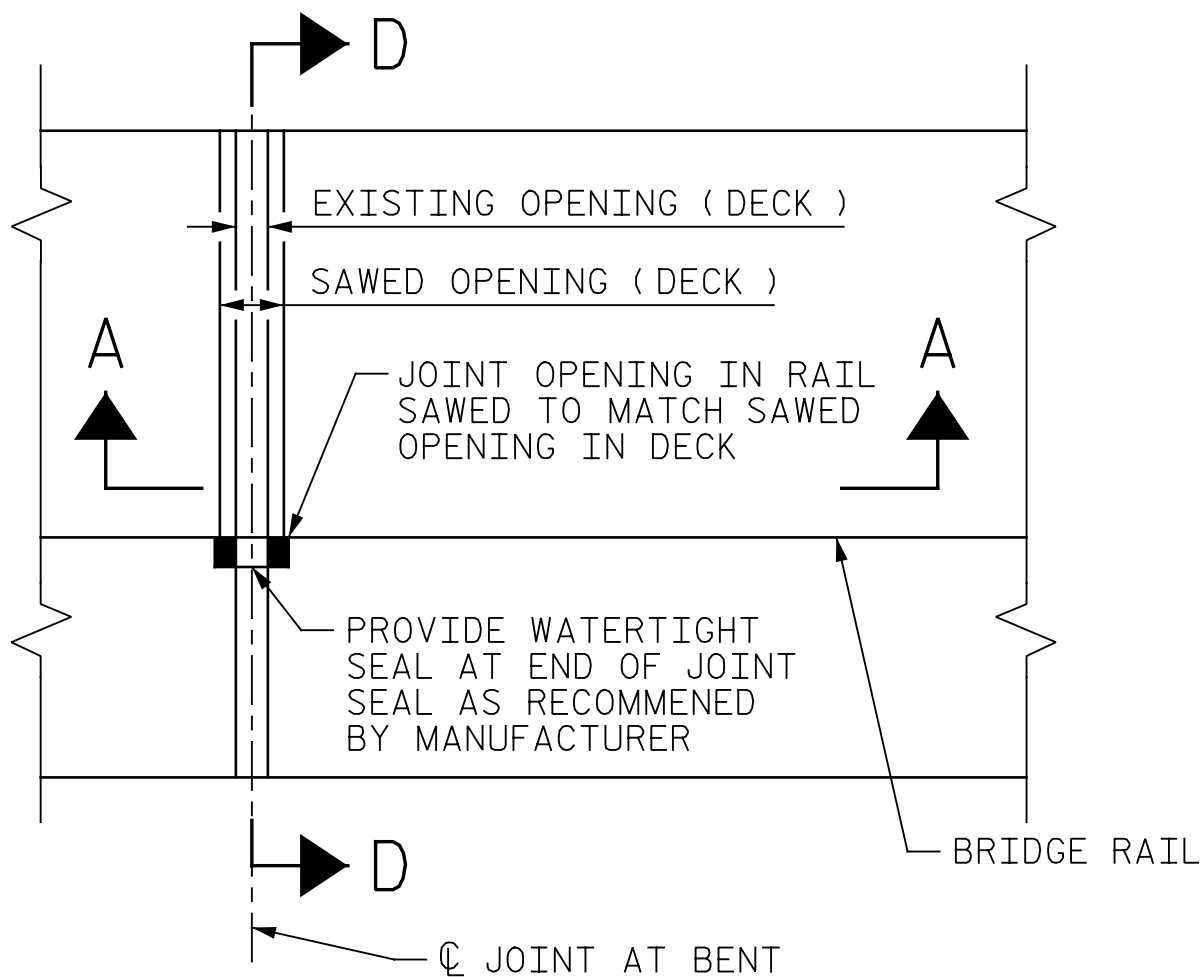
JOINT DEMOLITION
FOR CAVING OR
UN SOUND CONCRETE



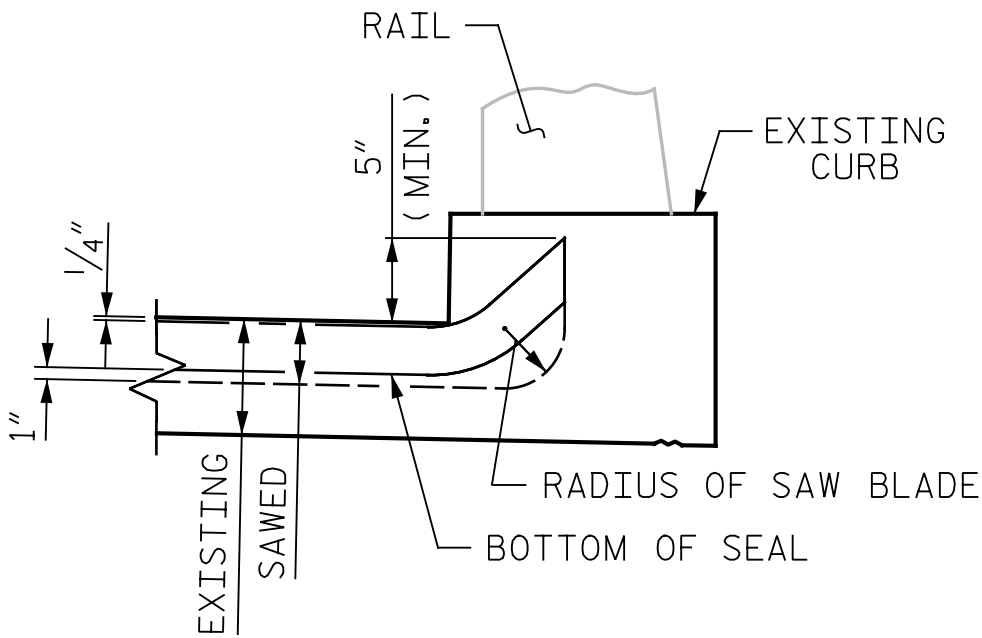
REPAIRED JOINT

CONCRETE FOR DECK REPAIR DETAIL

(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)

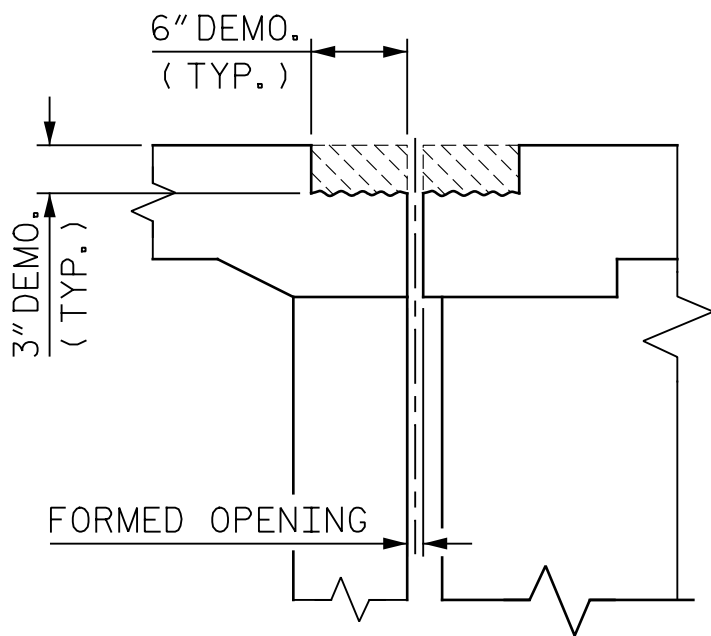


PLAN

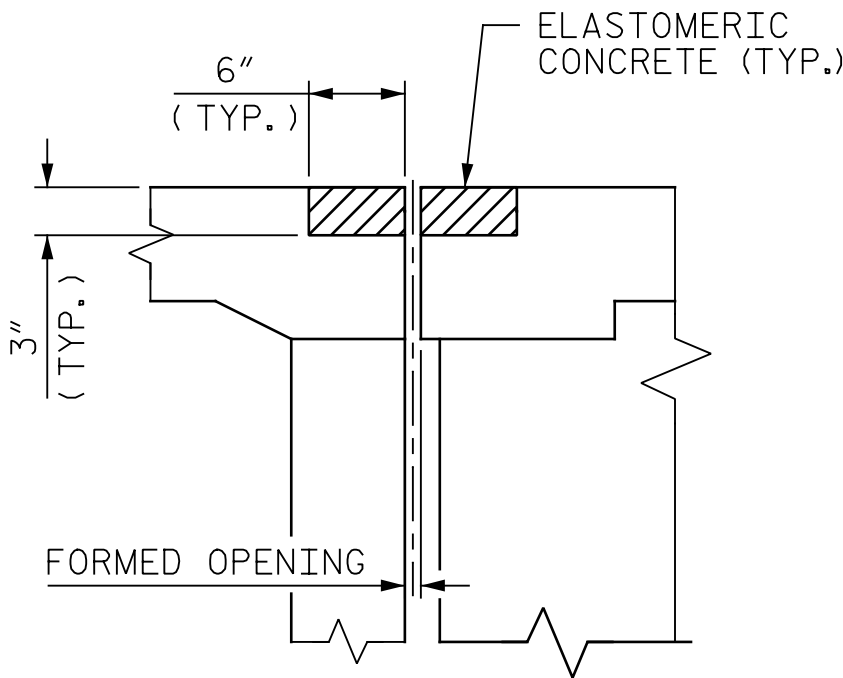


SECTION D-D

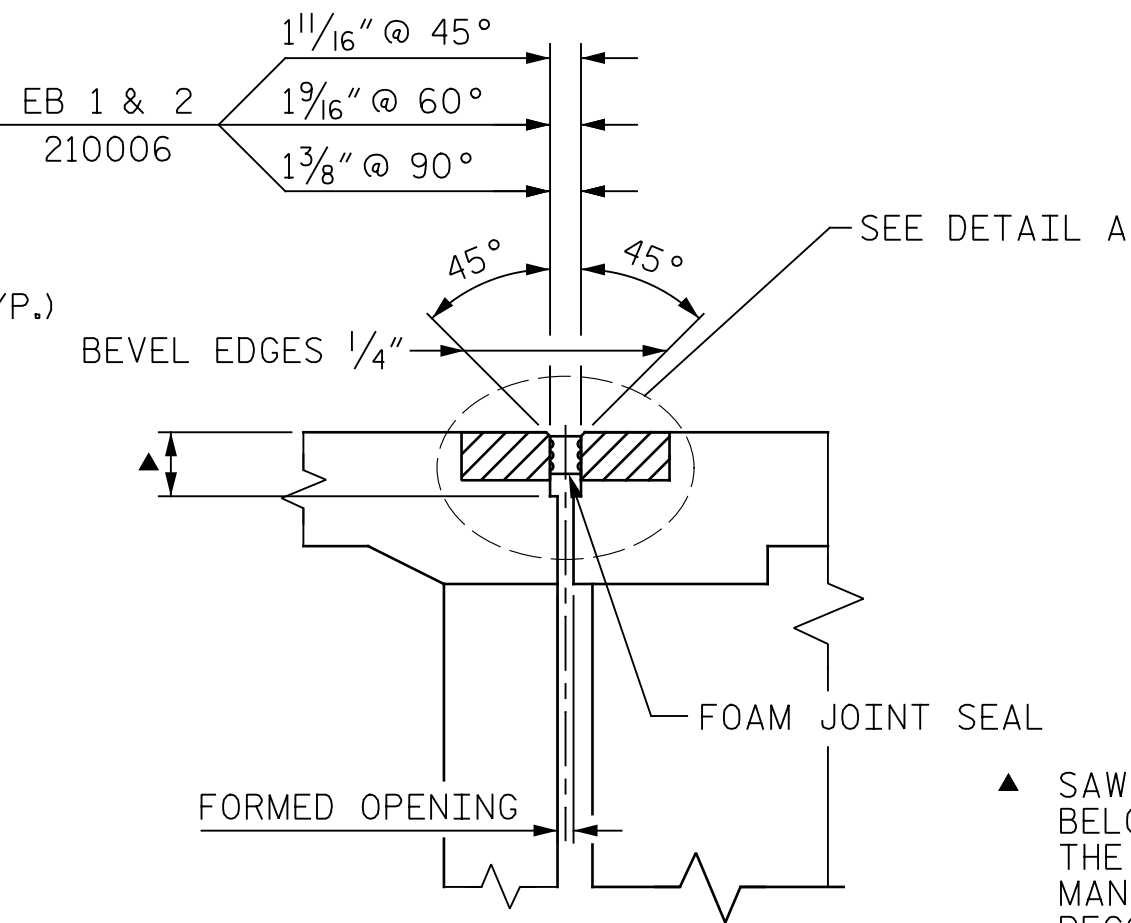
JOINT SEAL DETAILS AT BENT



MINIMUM
JOINT DEMOLITION



PROPOSED JOINT
PRE-SAWED DIMENSIONS



PROPOSED FOAM
JOINT SEAL

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS

SECTION A-A
PROPOSED JOINT

PROJECT NO. 14BPR.3.1
CLAY COUNTY
BRIDGE NO. 6

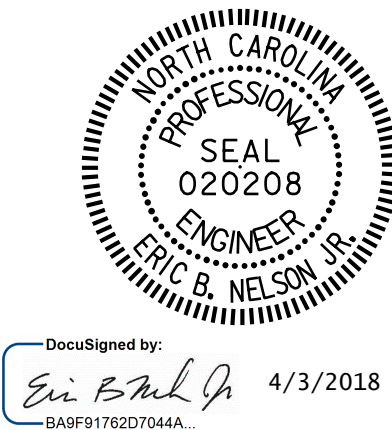
FOAM JOINT SEAL (LF)			ELASTOMERIC CONCRETE (CF) / HEADER DIMENSIONS (WIDTH X DEPTH)				JOINT DEMOLITION (SF)		CONCRETE FOR DECK REPAIR (CF)	
BRIDGE NO.	EB 1	EB 2	EB 1	DIM.	EB 2	DIM.	EB 1	EB 2	EB 1	EB 2
210006	94.4	94.4	23.1	(2) 6"x3"	23.1	(2) 6"x3"	92.4	92.4	-	-

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

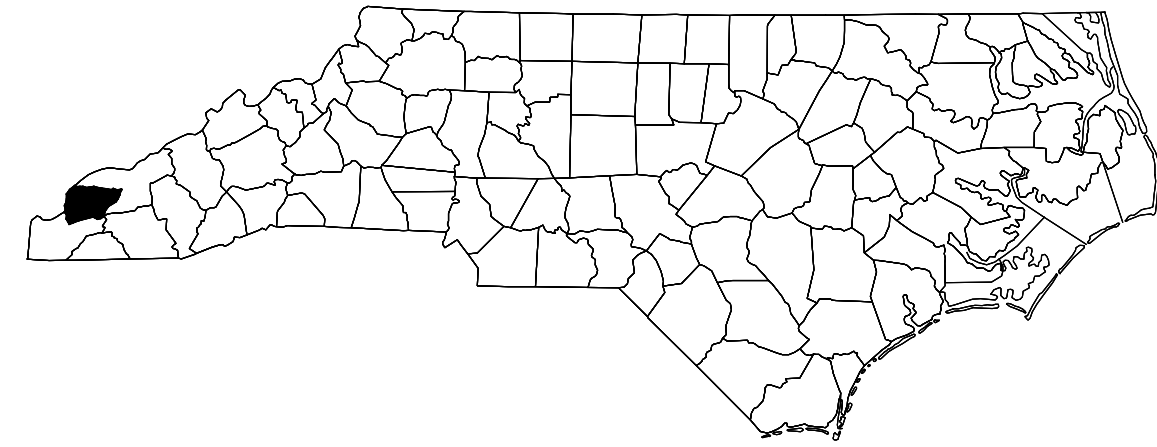
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAIL FOR
FOAM JOINT SEAL WITH
ELASTOMERIC HEADER

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-13
1			3			TOTAL SHEETS
2			4			142



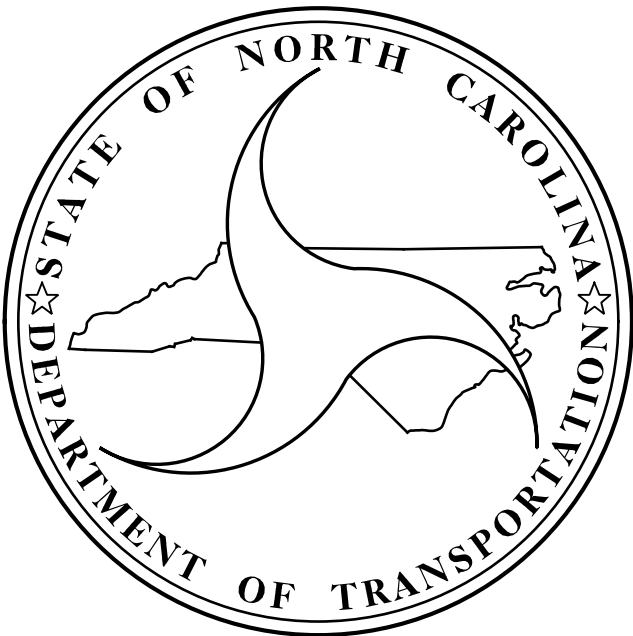
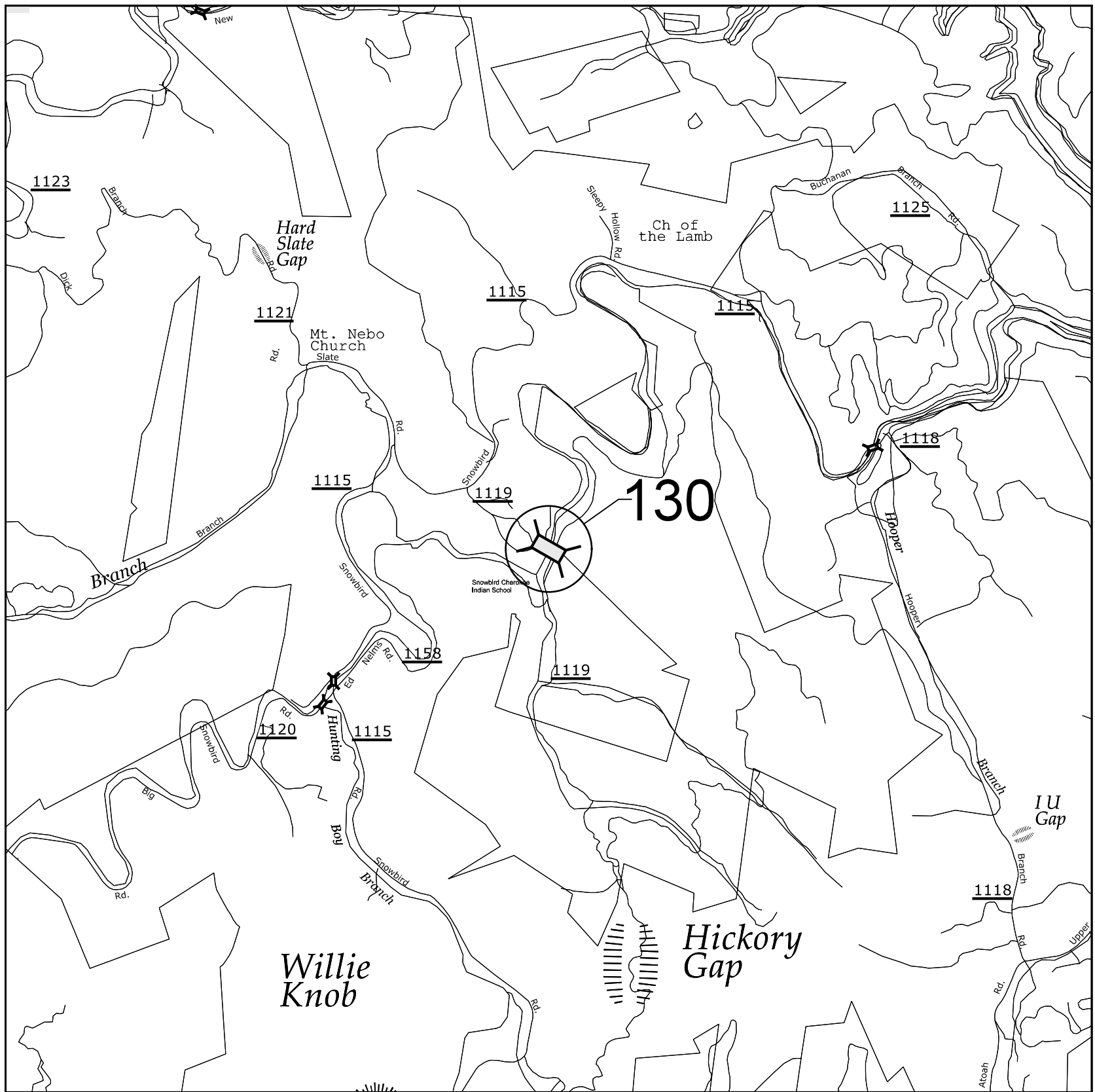
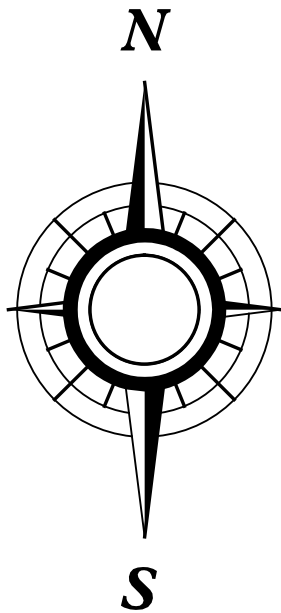
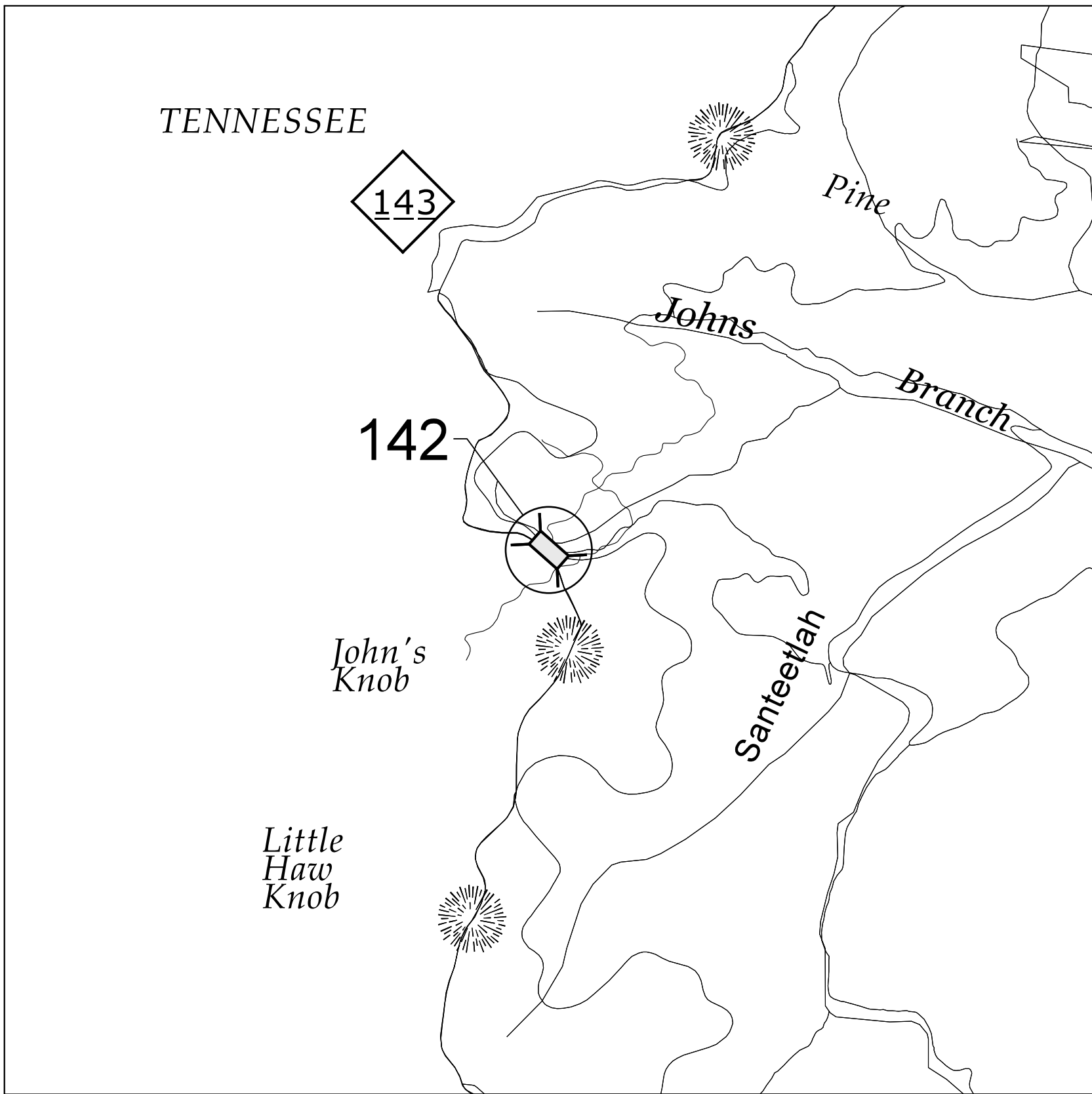
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-14

GRAHAM COUNTY

LOCATION: GRAHAM COUNTY:
BRIDGE #130 ON SR1119 OVER SNOWBIRD CREEK
BRIDGE #142 ON NC143 OVER N. RIVER ROAD

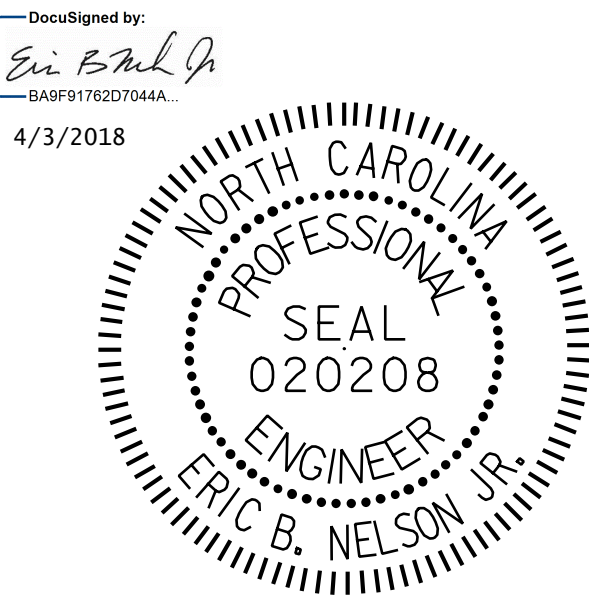
TYPE OF WORK: BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENTS

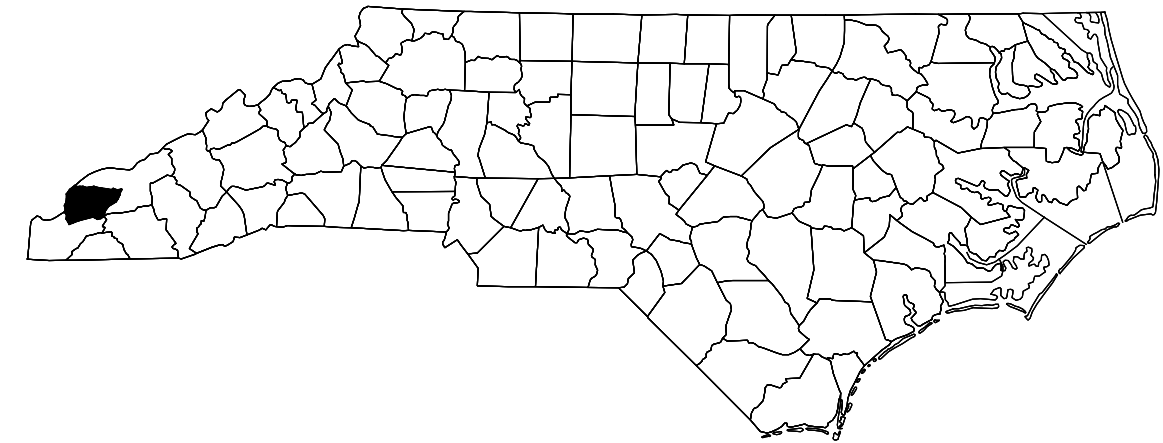


DESIGN DATA
GRAHAM COUNTY
#130 ADT 1996 = 100
#142 ADT 2011 = 340

PROJECT LENGTH
GRAHAM COUNTY
#130 = 0.017 MILE
#142 = 0.023 MILE

PLANS PREPARED BY:
 **Gannett Fleming**
Excellence Delivered **As Promised**
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270





STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-15

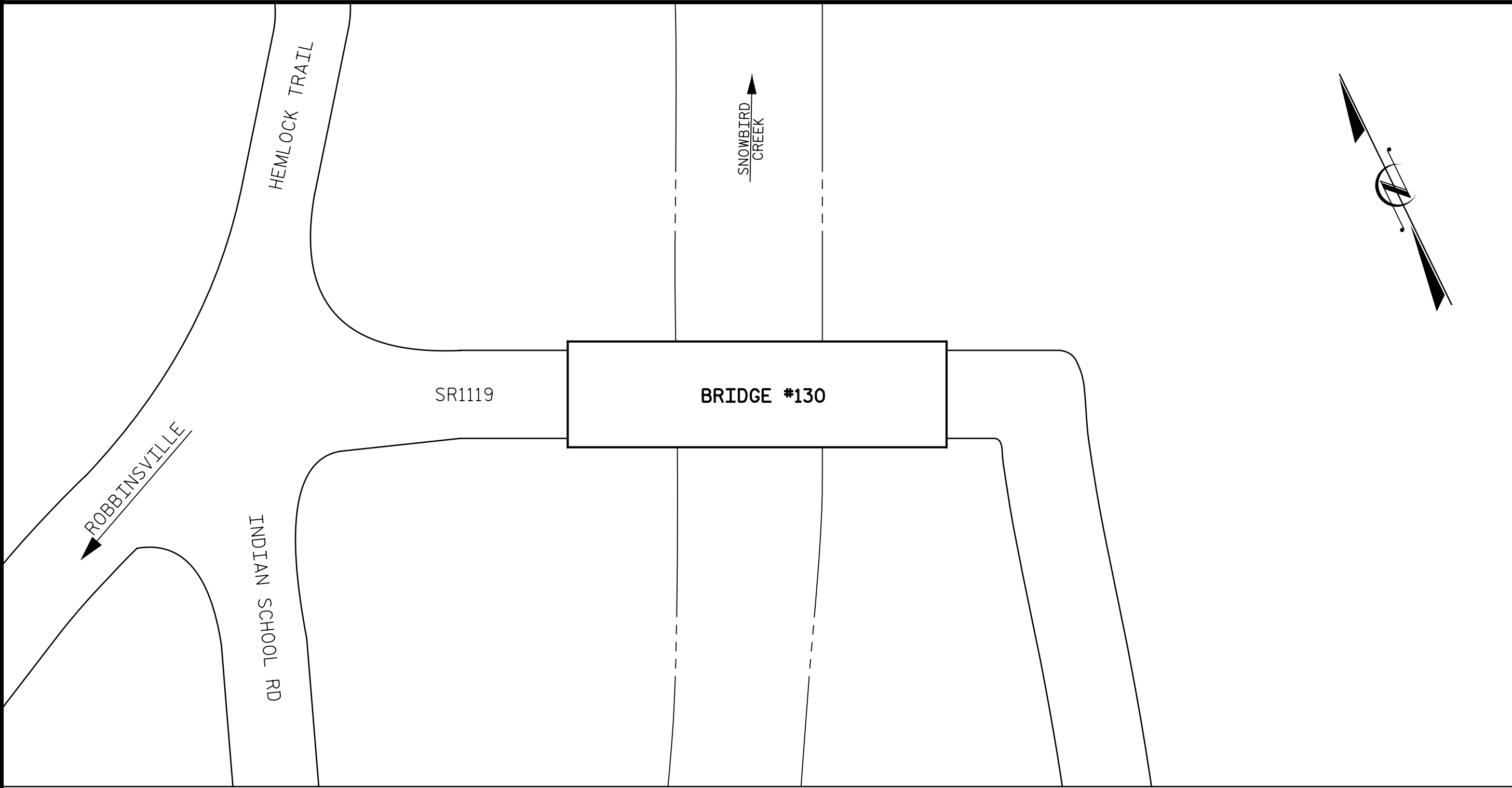
GRAHAM COUNTY

LOCATION: GRAHAM COUNTY:
BRIDGE #130 ON SR1119 OVER SNOWBIRD CREEK
BRIDGE #142 ON NC143 OVER N. RIVER ROAD

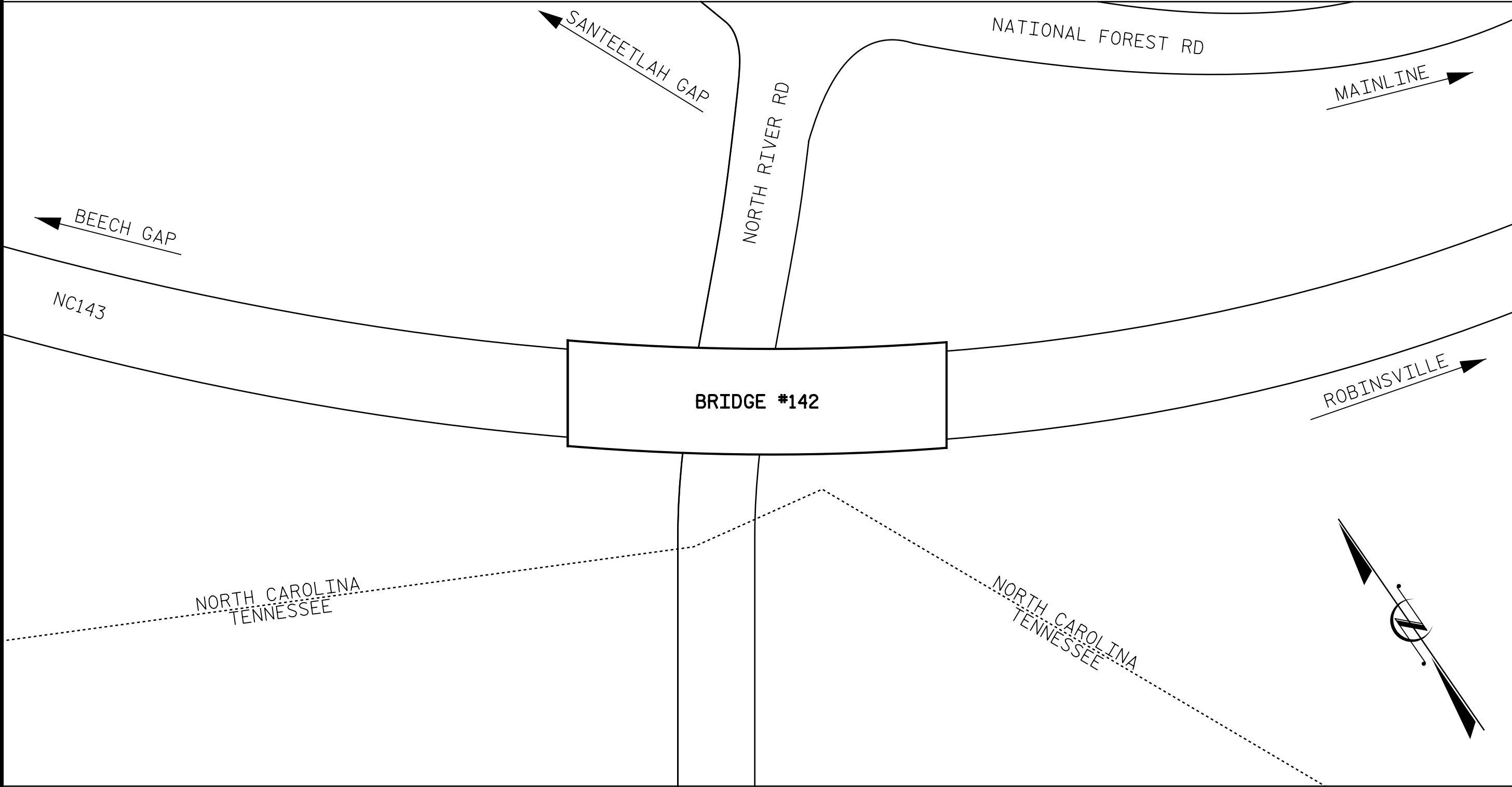
TYPE OF WORK: BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENTS

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
S-14	TITLE SHEET
S-15	INDEX OF SHEETS
S-16 THRU S-18	STRUCTURAL PLANS – JOINT REPLACEMENTS



BRIDGE #130



BRIDGE #142

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

GENERAL NOTES

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

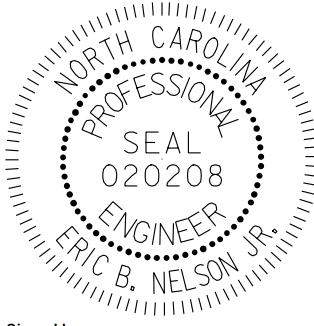
FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

BILL OF MATERIAL FOR GRAHAM COUNTY	
	SILICONE JOINT SEALANT
	LN. FT.
370130	54.0
370142	73.0
TOTAL	127.0

PROJECT NO. 14BPR.3.1
GRAHAM COUNTY



DocuSigned by:
Eric B. Nelson, Jr.
4/3/2018

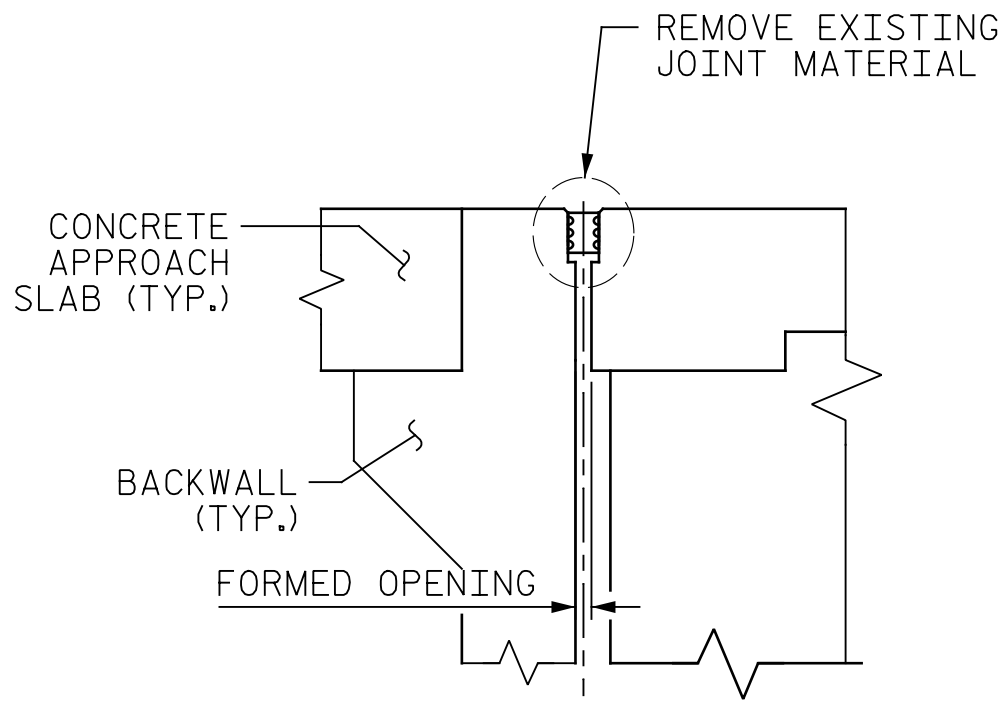
PLANS PREPARED BY:
 Gannett Fleming
2610 Wycliff Road
Suite 102
Raleigh, NC 27607-3073
(919) 420-7660
Excellence Delivered **As Promised**
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH											
BILL OF MATERIAL & BRIDGE LOCATION SKETCHES											
REVISIONS									SHEET NO.		
NO.	BY:	DATE:	NO.	BY:	DATE:	S-16					
1			3			TOTAL SHEETS					
2			4			142					

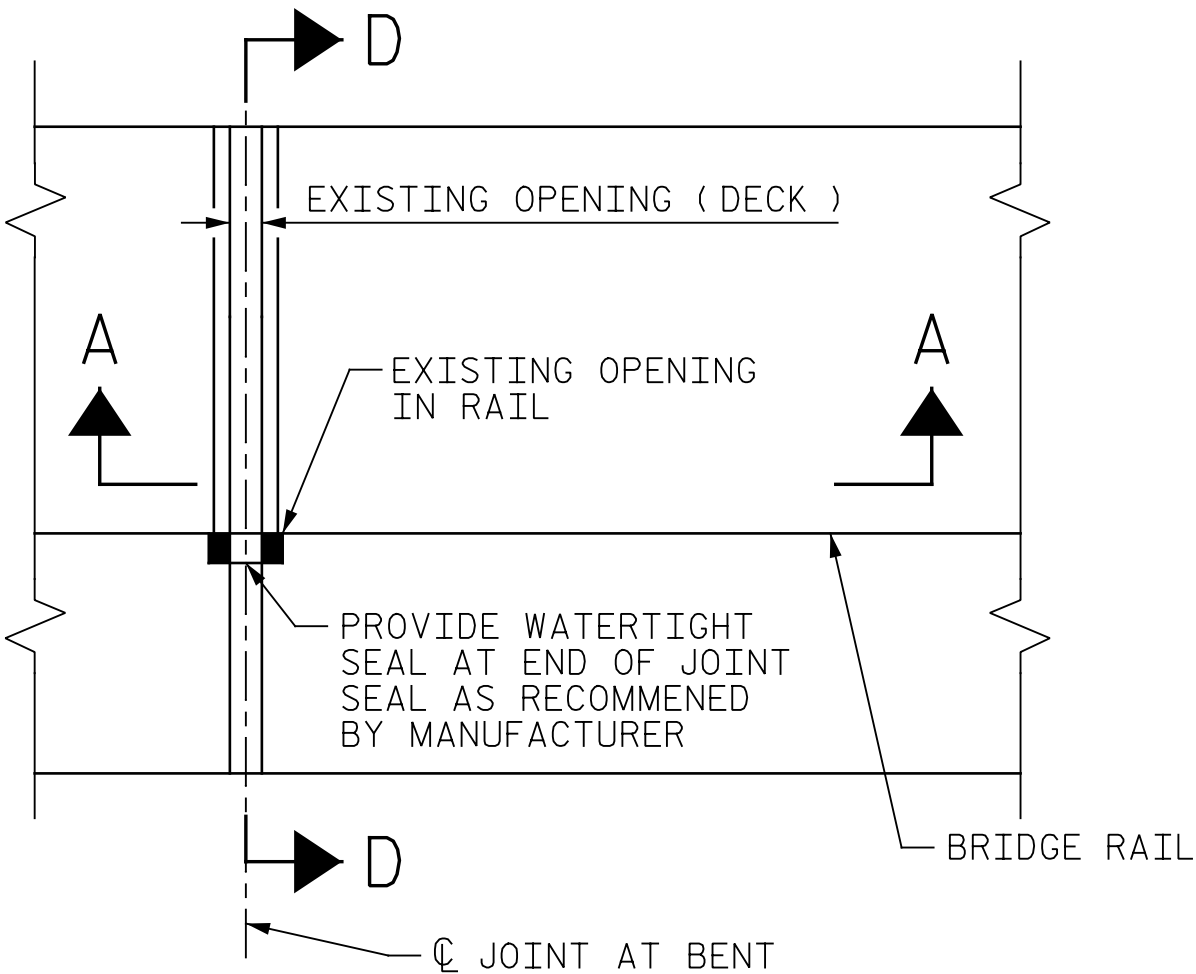
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FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

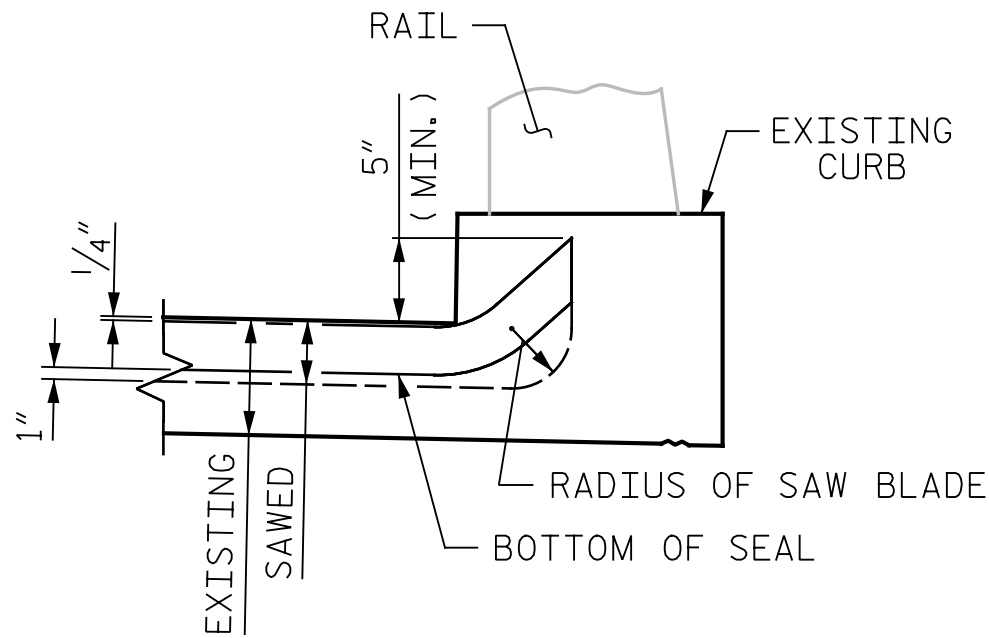


EXISTING JOINT
(FOAM SEAL WITH NO HEADER)

EXISTING JOINT TYPES



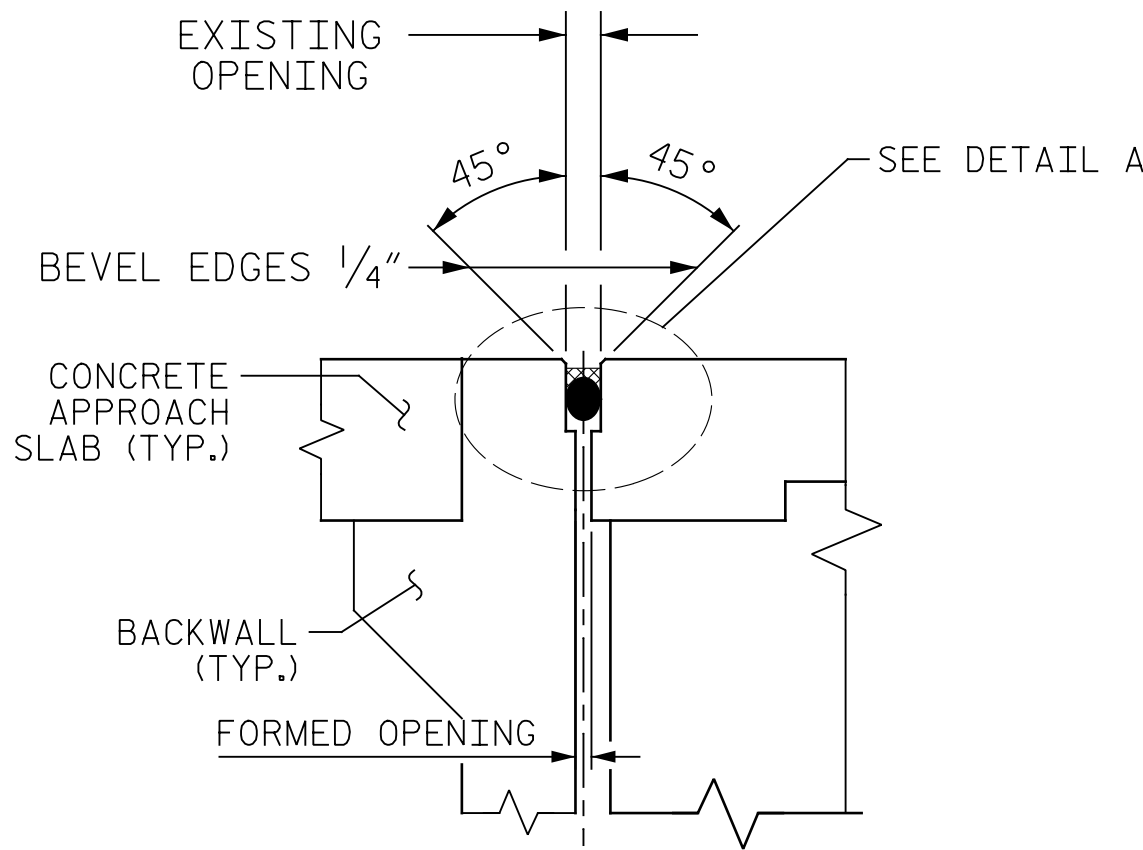
PLAN



SECTION D-D

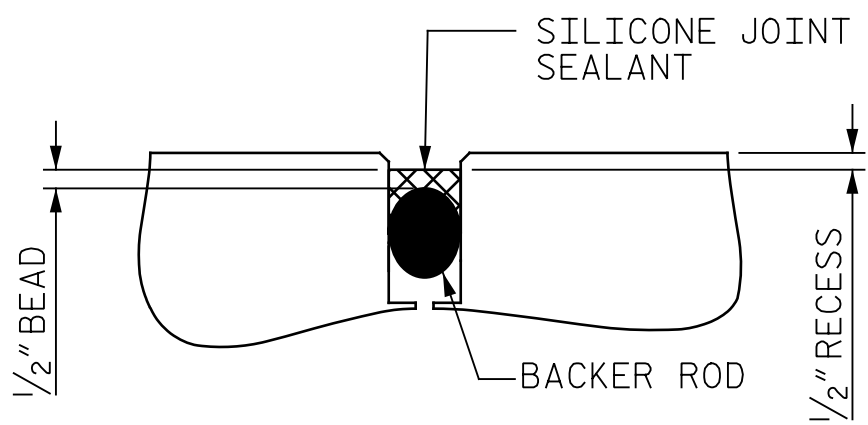
JOINT SEAL DETAILS AT BENT

SILICONE JOINT SEAL (LF)				
BRIDGE NO.	EB 1	BENT 1	BENT 2	EB 2
370130	27.0	-	-	27.0



PROPOSED SILICONE JOINT SEAL

SECTION A-A
PROPOSED JOINT



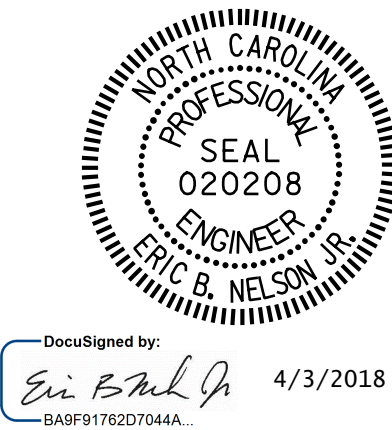
DETAIL A

PROJECT NO. 14BPR.3.1
GRAHAM COUNTY
BRIDGE NO. 130

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

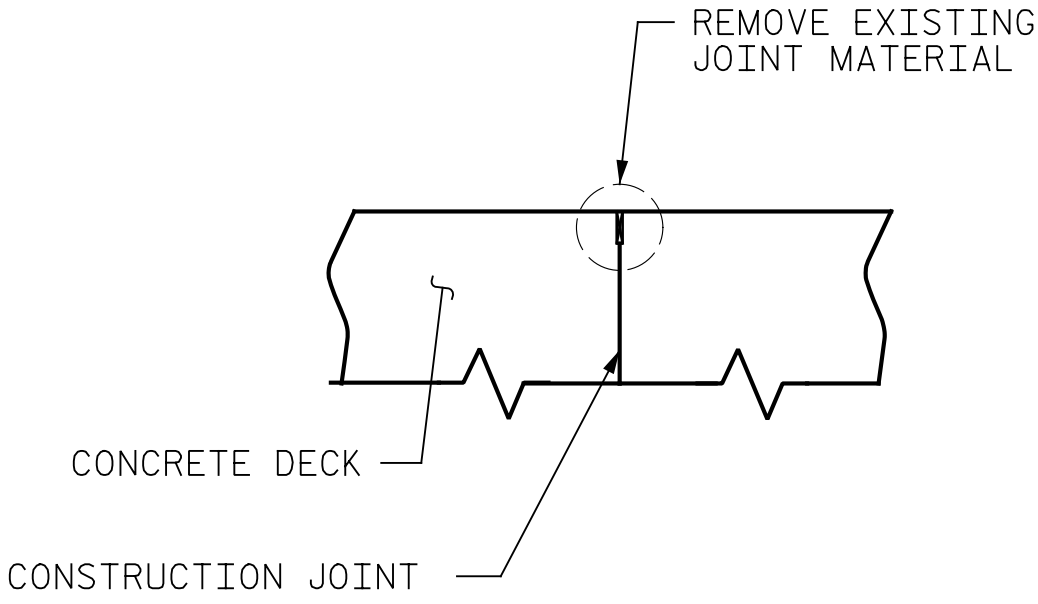
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH											
JOINT DETAIL FOR SILICONE JOINT SEAL											
REVISIONS									SHEET NO.		
NO.	BY:	DATE:		NO.	BY:	DATE:		S-17			
1				3				TOTAL SHEETS			
2				4				142			

NOTES

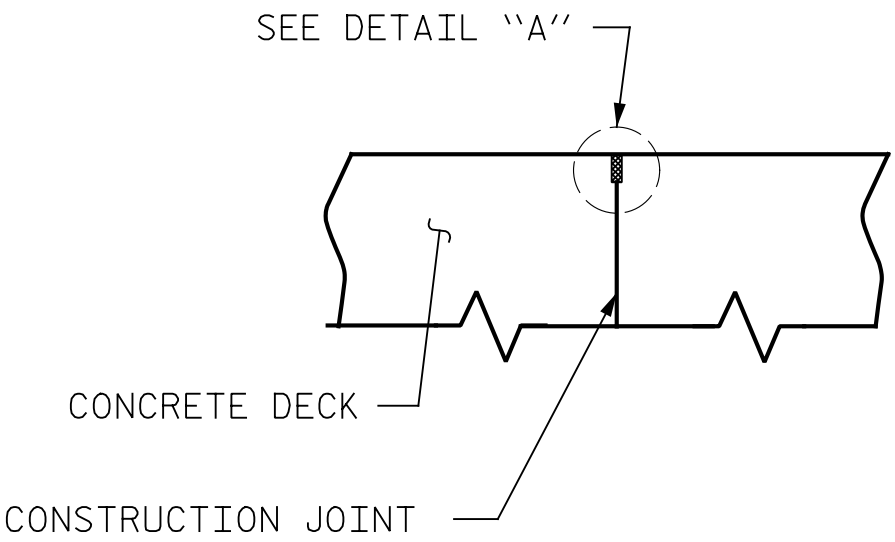
FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.



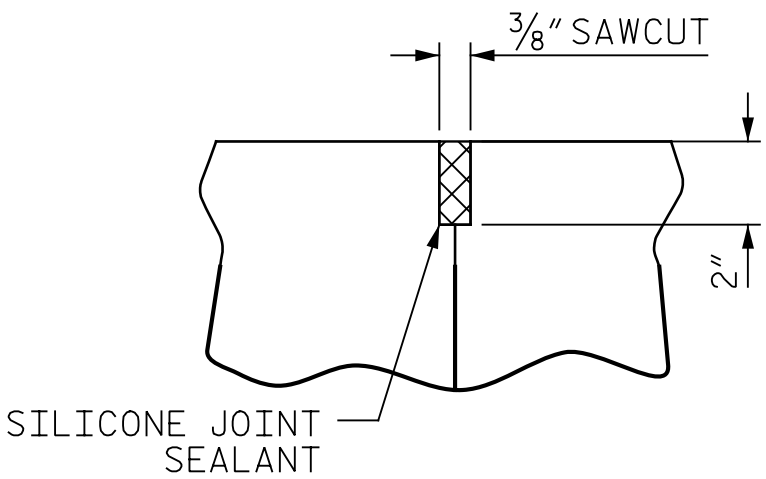
EXISTING JOINT

EXISTING JOINT TYPES

SILICONE JOINT SEAL (LF)				
BRIDGE NO.	EB 1	BENT 1	BENT 2	EB 2
370142	-	36.5	36.5	-



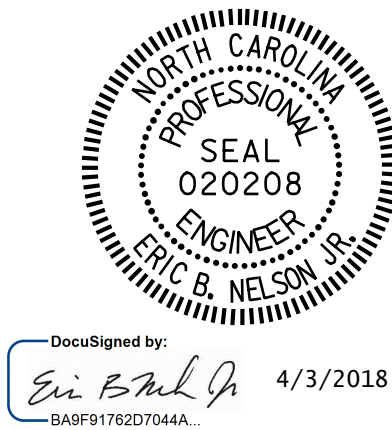
PROPOSED SILICONE JOINT SEAL



DETAIL A

SECTION A-A
PROPOSED JOINT

PROJECT NO. 14BPR.3.1
GRAHAM COUNTY
BRIDGE NO. 142



DocuSigned by:
Eric B. Nelson 4/3/2018

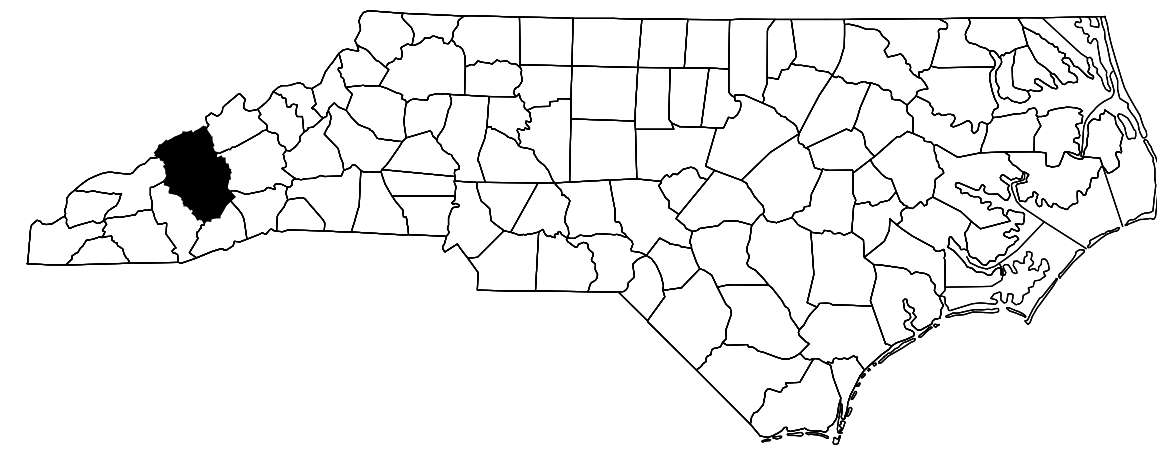
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
JOINT DETAIL FOR
SILICONE JOINT SEAL
AT CONSTRUCTION
JOINTS

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO. S-18
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-19

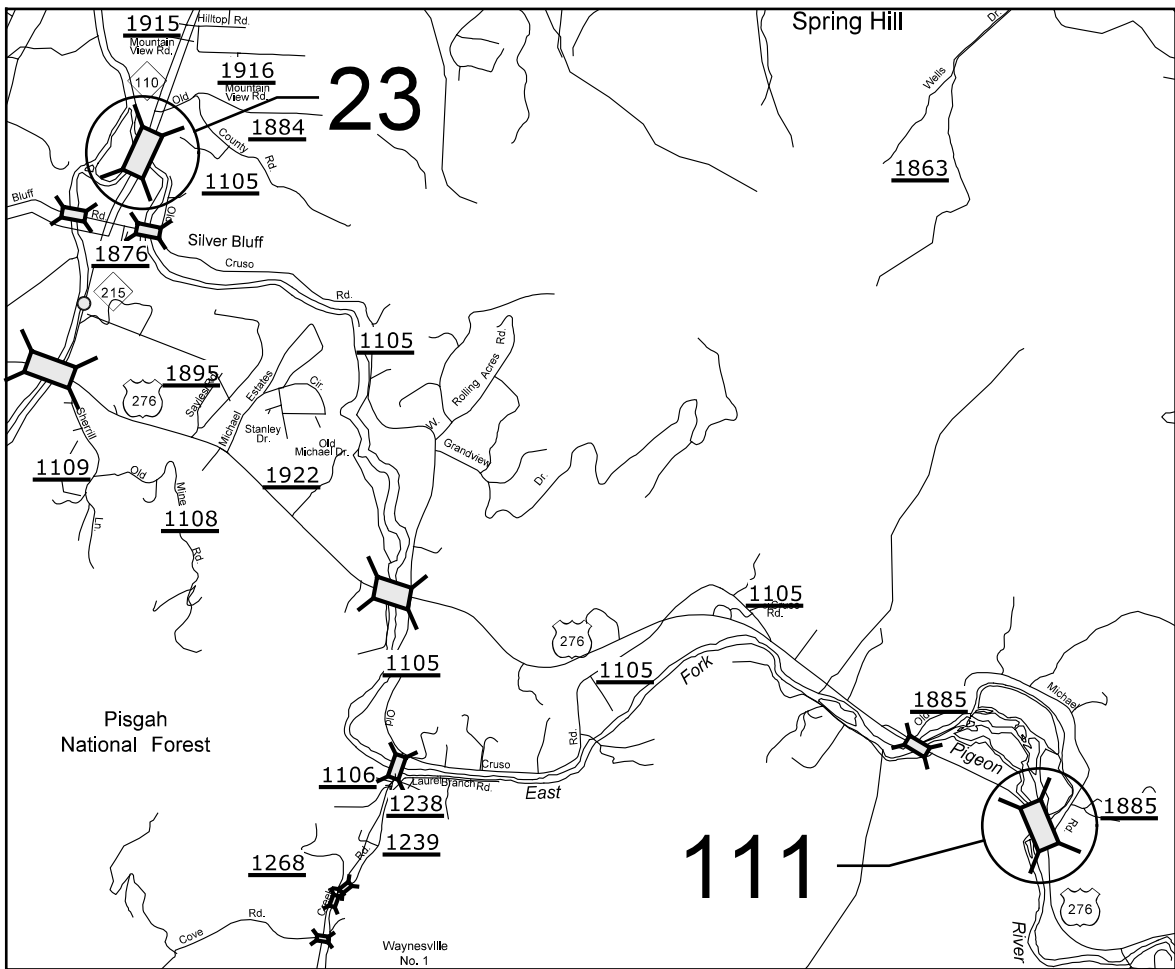
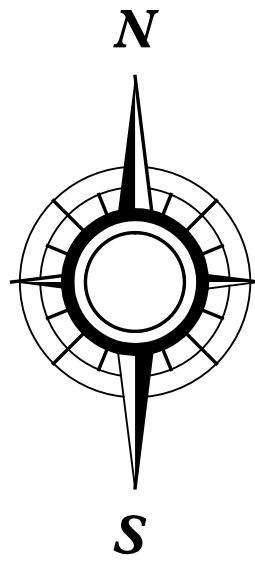
HAYWOOD COUNTY

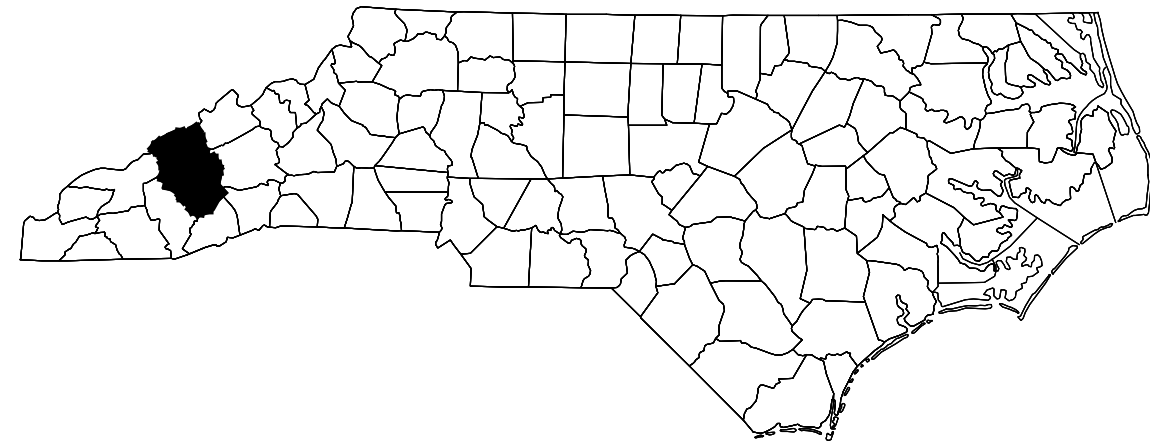
LOCATION: HAYWOOD COUNTY:

BRIDGE #023 ON NC110 OVER EAST FORK PIGEON RIVER
BRIDGE #036 ON SR1503 OVER CRABTREE CREEK
BRIDGE #069 ON NC209 OVER RICHLAND CREEK
BRIDGE #094 ON US19 OVER RICHLAND CREEK
BRIDGE #098 ON NC209 OVER PIGEON RIVER
BRIDGE #107 ON US19, US23, US74 NORTH BOUND OVER SOUTHERN RAILWAY
BRIDGE #109 ON US23, US74 SOUTH BOUND OVER SR1173 AND PLOTT CREEK
BRIDGE #110 ON US19, US23 SOUTH BOUND OVER SOUTHERN RAILWAY
BRIDGE #111 ON US276 OVER EAST FORK PIGEON RIVER
BRIDGE #112 ON SR1147 OVER ALLENS CREEK

BRIDGE #114 ON US74 OVER PIGEON RIVER, SR1513 AND SR1523
BRIDGE #138 ON US23, US74 OVER US276 NORTH BOUND
BRIDGE #141 ON US23, US74 OVER US276 SOUTH BOUND
BRIDGE #204 ON SR1334 OVER FINES CREEK
BRIDGE #211 ON SR1519 OVER RICHLAND CREEK
BRIDGE #251 ON SR1004 OVER I40
BRIDGE #272 ON SR1643 OVER SOUTHERN RAILROAD
BRIDGE #374 ON SR1349 OVER JONATHANS CREEK
BRIDGE #445 ON NC215 OVER PIGEON RIVER

TYPE OF WORK: BRIDGE PRESERVATION - DECK OVERLAY WITH LATEX MODIFIED CONCRETE AND BRIDGE JOINT REPLACEMENTS





STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-20

HAYWOOD COUNTY

LOCATION: HAYWOOD COUNTY:

BRIDGE #023 ON NC110 OVER EAST FORK PIGEON RIVER
BRIDGE #036 ON SR1503 OVER CRABTREE CREEK
BRIDGE #069 ON NC209 OVER RICHLAND CREEK
BRIDGE #094 ON US19 OVER RICHLAND CREEK
BRIDGE #098 ON NC209 OVER PIGEON RIVER
BRIDGE #107 ON US19, US23, US74 NORTH BOUND OVER SOUTHERN RAILWAY
BRIDGE #109 ON US23, US74 SOUTH BOUND OVER SR1173 AND PLOTT CREEK
BRIDGE #110 ON US19, US23 SOUTH BOUND OVER SOUTHERN RAILWAY
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BRIDGE #112 ON SR1147 OVER ALLENS CREEK

BRIDGE #114 ON US74 OVER PIGEON RIVER, SR1513, AND SR1523
BRIDGE #138 ON US23, US74 OVER US276 NORTH BOUND
BRIDGE #141 ON US23, US74 OVER US276 SOUTH BOUND
BRIDGE #204 ON SR1334 OVER FINES CREEK
BRIDGE #211 ON SR1519 OVER RICHLAND CREEK
BRIDGE #251 ON SR1004 OVER I40
BRIDGE #272 ON SR1643 OVER SOUTHERN RAILROAD
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BRIDGE #445 ON NC215 OVER PIGEON RIVER

TYPE OF WORK: BRIDGE PRESERVATION – DECK OVERLAY WITH LATEX MODIFIED CONCRETE AND BRIDGE JOINT REPLACEMENTS

INDEX OF SHEETS

SHEET NO.

S-19
S-20
S-21
S-22 THRU S-31
S-32 THRU S-40

DESCRIPTION

TITLE SHEET
INDEX OF SHEETS
BILL OF MATERIAL FOR HAYWOOD COUNTY
STRUCTURAL PLANS- 430098
STRUCTURAL PLANS – JOINT REPLACEMENTS


BILL OF MATERIAL FOR HAYWOOD COUNTY																				
	INCIDENTAL MILLING	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B	ASPHALT BINDER FOR PLANT MIX	GROOVING BRIDGE FLOORS	CLASS AA CONCRETE	REINFORCING STEEL	CLASS II, SURFACE PREPARATION	* CLASS III, SURFACE PREPARATION	LATEX MODIFIED CONCRETE OVERLAY	PLACING AND FINISHING LATEX MOD. CONCRETE OVERLAY	VOLUMETRIC MIXER	EXPANSION JOINT SEAL REPAIR	FOAM JOINT SEALS	SILICONE JOINT SEALANT	SYNTHETIC RUBBER EXPANSION JOINT SEAL	* CONCRETE FOR DECK REPAIR	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION	HYDRO-DEMOLITION OF BRIDGE DECK	SCARIFYING BRIDGE DECK
	SQ. FT.	TONS	TONS	SQ. FT.	CU. YDS.	LBS.	SQ. YDS.	SQ. YDS.	CU. YDS.	SQ. YDS.	LUMP SUM	LN. FT.	LN. FT.	LN. FT.	LN. FT.	CU. FT.	CU. FT.	SQ. FT.	SQ. YDS.	SQ. YDS.
430023	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	-	215.2	-	-	25.4	101.6	-	-
430036	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	-	74.2	-	-	-	-	-	-
430069	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	-	103.0	-	-	24.2	97.0	-	-
430094	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	-	193.2	-	20.0	55.6	222.8	-	-
430098	716	60	4	15955	2.8	308	21.4	-	113.9	1932	-	-	-	172.8	-	-	39.4	144.0	1932	1932
430107	-	-	-	-	-	-	-	-	-	-	LUMP SUM	96.6	-	98.6	-	-	23.2	92.6	-	-
430109	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	-	120	-	-	27.9	111.0	-	-
430110	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	96.8	-	-	-	23.2	92.8	-	-
430111	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	-	93.0	-	-	21.8	87.0	-	-
430112	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	-	93.2	-	-	-	-	-	-
430114	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	-	-	122.0	-	-	-	-	-
430138	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	-	123.6	183.9	-	29.4	117.6	-	-
430141	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	-	123.6	183.9	-	29.4	117.6	-	-
430204	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	-	80.0	-	-	18.6	74.0	-	-
430211	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	-	76.0	-	-	-	-	-	-
430251	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	-	198.5	-	-	46.0	183.5	-	-
430272	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	38.0	38.0	-	-	14.0	56.0	-	-
430374	-	-	-	-	-	-	-	-	-	-	LUMP SUM	-	-	78.0	-	-	-	-	-	-
430445	-	-	-	-	-	-	-	-	-	-	LUMP SUM	152.7	-	99.0	-	-	19.8	79.2	-	-
TOTAL	716	60	4	15955	2.8	308	21.4	-	113.9	1932	LUMP SUM	249.3	134.8	1979.9	489.8	20.0	397.9	1576.7	1932	1932

* ESTIMATED QUANTITY FOR BIDDING PURPOSES.

PROJECT NO. 17BPR.3.1
HAYWOOD COUNTY

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
 **Gannett Fleming**
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
[NC Lic. No. F-0270]

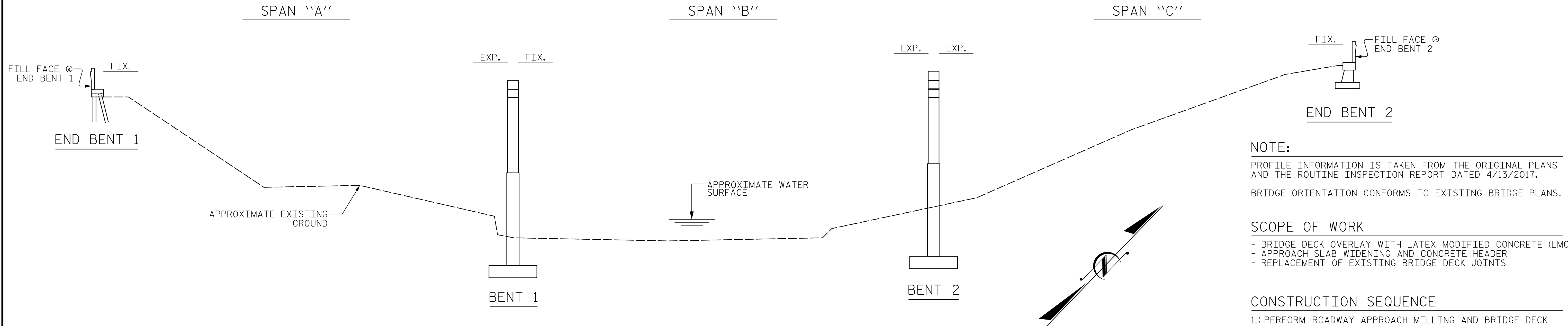

DocuSigned by:
Eric B. Nelson Jr. 4/3/2018
BAGF91762D7044A.

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BILL OF MATERIAL
FOR HAYWOOD
COUNTY

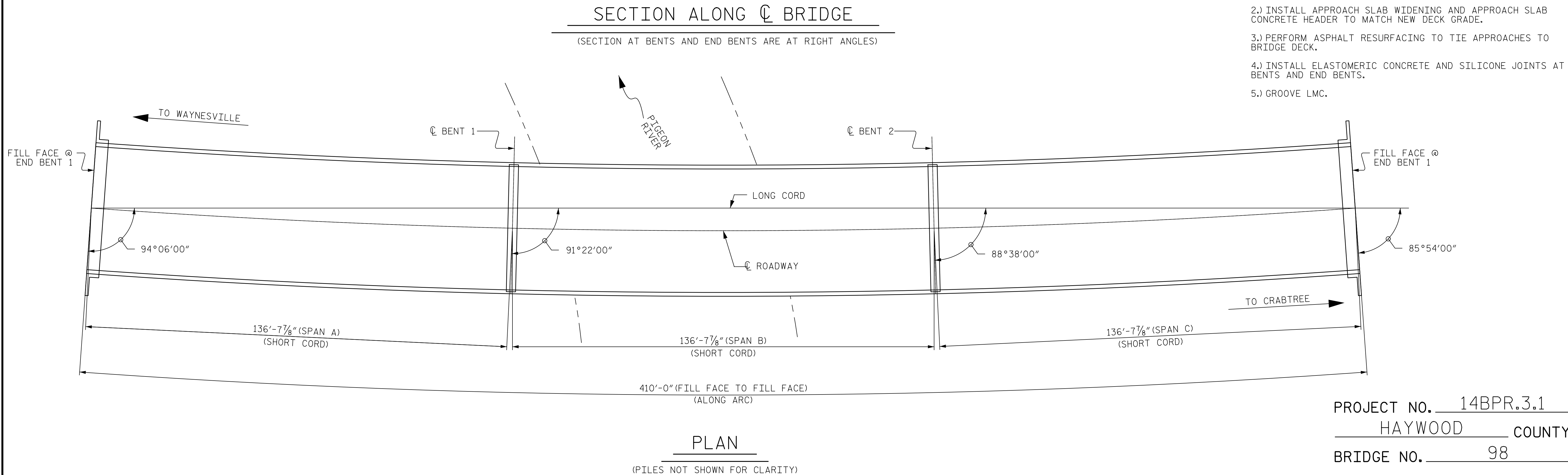
REVISIONS						SHEET NO. S-21
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			



NOTE:
PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 4/13/2017.
BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

- SCOPE OF WORK
- BRIDGE DECK OVERLAY WITH LATEX MODIFIED CONCRETE (LMC)
 - APPROACH SLAB WIDENING AND CONCRETE HEADER
 - REPLACEMENT OF EXISTING BRIDGE DECK JOINTS

- CONSTRUCTION SEQUENCE
- 1.) PERFORM ROADWAY APPROACH MILLING AND BRIDGE DECK OVERLAY SURFACE PREPARATON AND PLACE LMC OVERLAY.
 - 2.) INSTALL APPROACH SLAB WIDENING AND APPROACH SLAB CONCRETE HEADER TO MATCH NEW DECK GRADE.
 - 3.) PERFORM ASPHALT RESURFACING TO TIE APPROACHES TO BRIDGE DECK.
 - 4.) INSTALL ELASTOMERIC CONCRETE AND SILICONE JOINTS AT BENTS AND END BENTS.
 - 5.) GROOVE LMC.



I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED
ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER

DATE



DocuSigned by:
Eric B. Nelson
4/3/2018

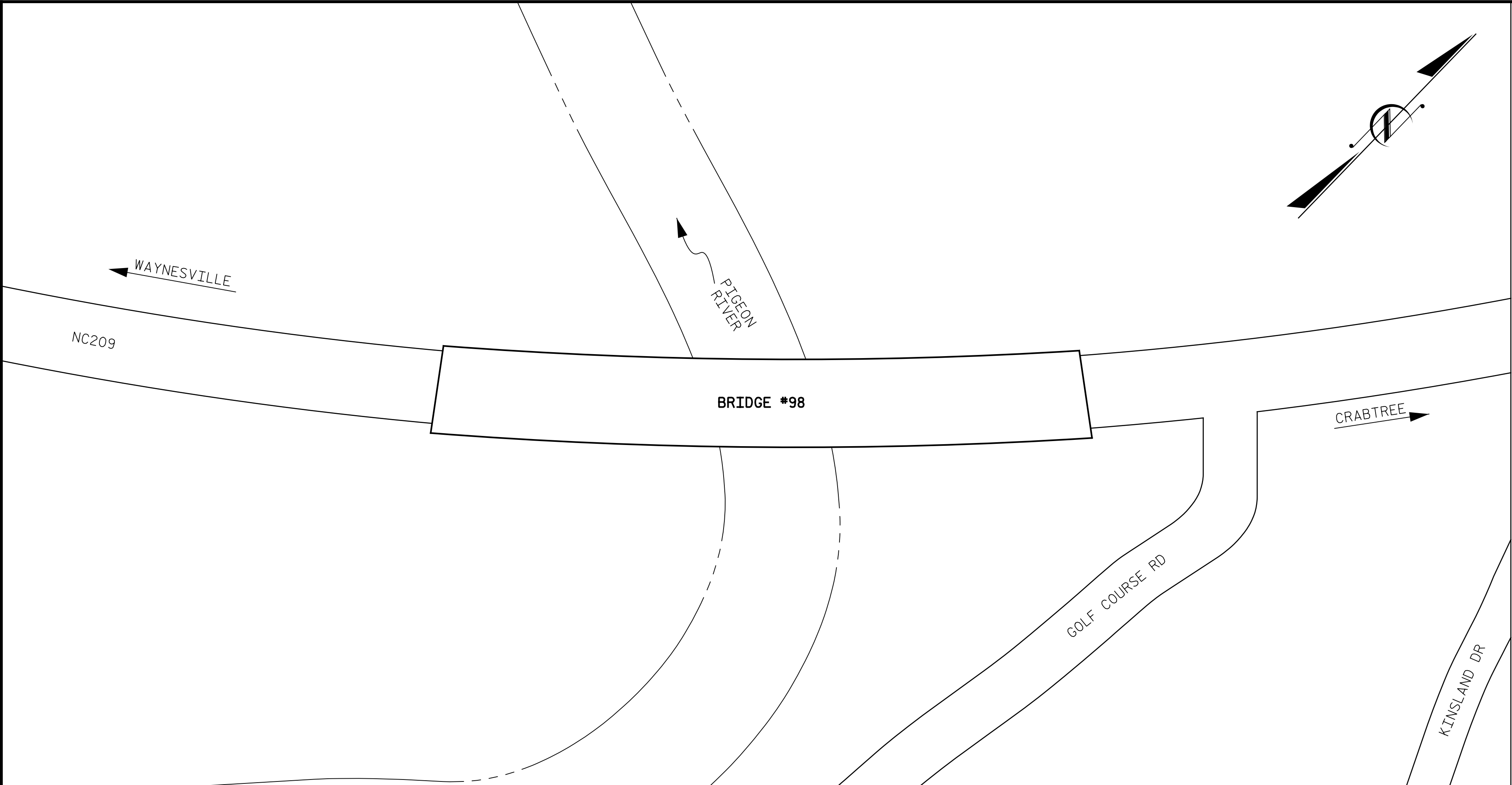
DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : J. REISINGER DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
Excellence Delivered **As Promised** NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
BRIDGE NO. 98

REVISIONS						SHEET NO. S-22
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			



LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

GENERAL NOTES

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. DIMENSIONS SHOWN FOR MILLING AND RESURFACING ARE APPROXIMATE. MILL AND RESURFACE AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF THE BRIDGE.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG LANE LINES OR EDGE LINES UNLESS OTHERWISE NOTED ON THE PLANS.

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THRU OF THE DECK DURING HYDRO-DEMOLITION.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO AND DURING REPAIR OF BRIDGE DECKS. WHEN RAIN IS PREDICTED BETWEEN WORK PERIODS THE CONTRACTOR SHALL REMOVE DECK DRAIN SEAL DEVICES. REINSTALL DECK DRAIN DEVICES PRIOR TO RESUMING DECK REPAIR ACTIVITIES.

DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO CONTROL RUN-OFF OF HYDRO-DEMOLITION WATER FROM FLOWING ACROSS TRAVEL LANES.

THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS. SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISION.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION OF BRIDGE DECK, AND CLASS II SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FOR OVERLAY OF BRIDGE DECK WITH LATEX MODIFIED CONCRETE, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
BRIDGE NO. 98

SHEET 2 OF 2



DocuSigned by:
Eric B. Nelson, Jr.
4/3/2018

PLANS PREPARED BY:
 Gannett Fleming
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
Excellence Delivered **As Promised** NC Lic. No. F-0270

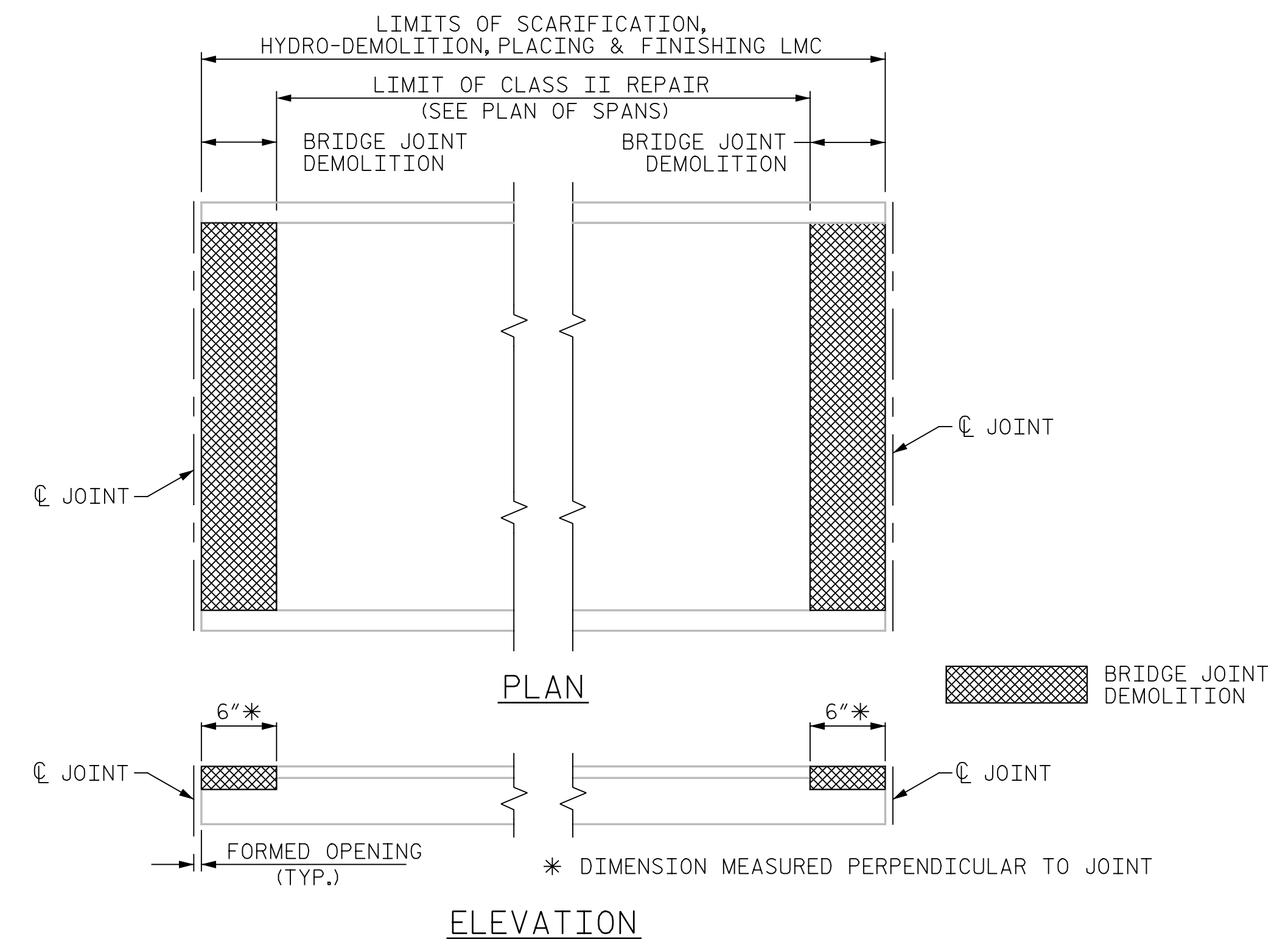
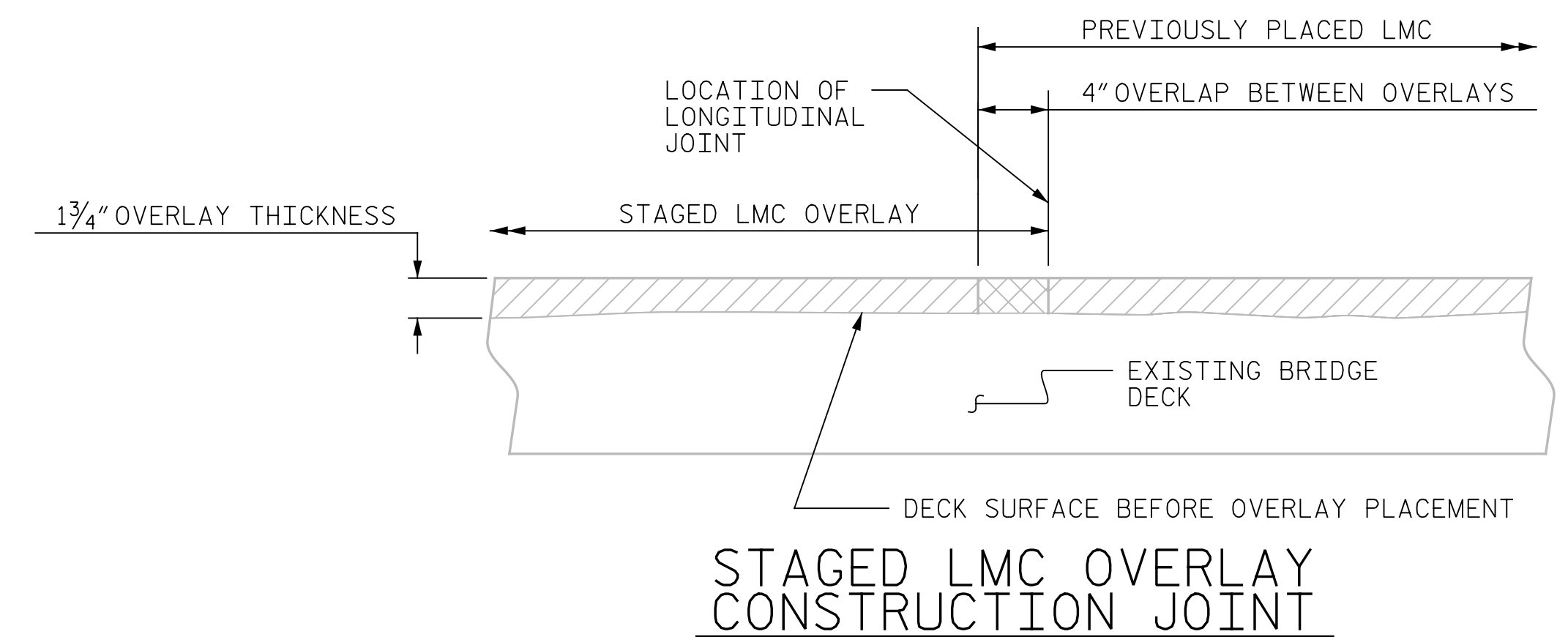
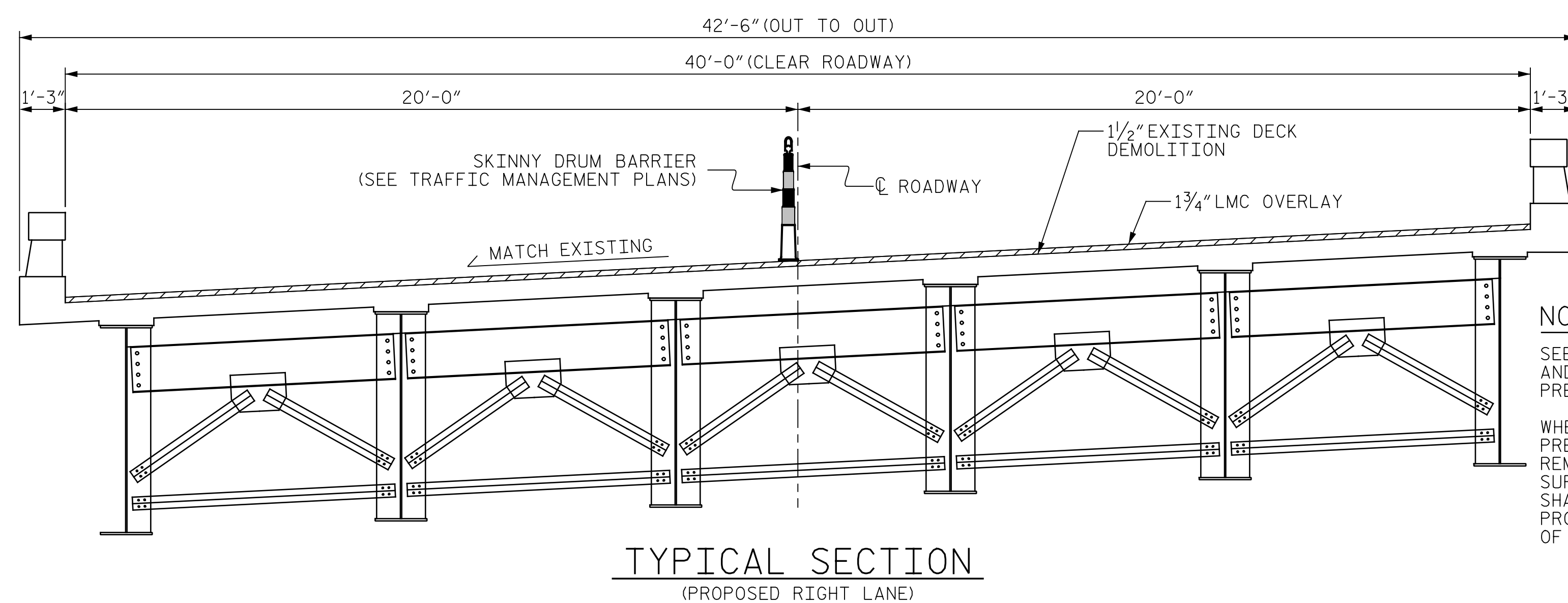
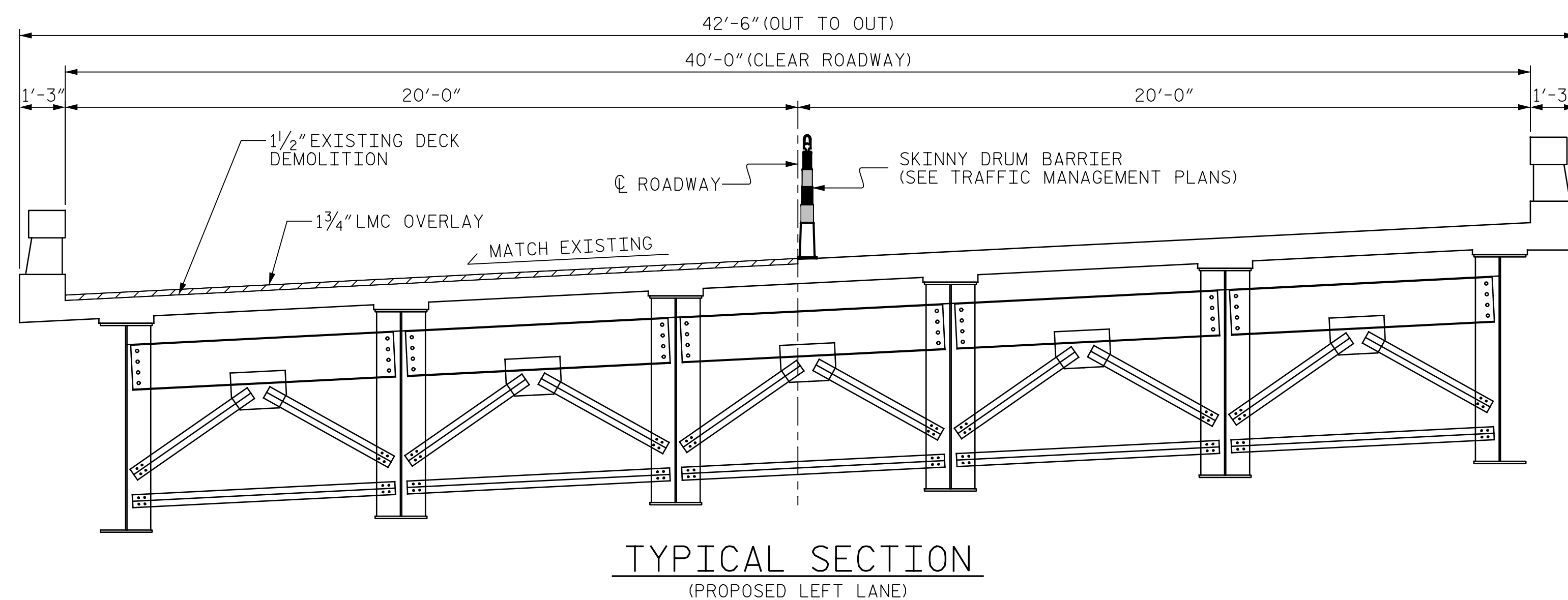
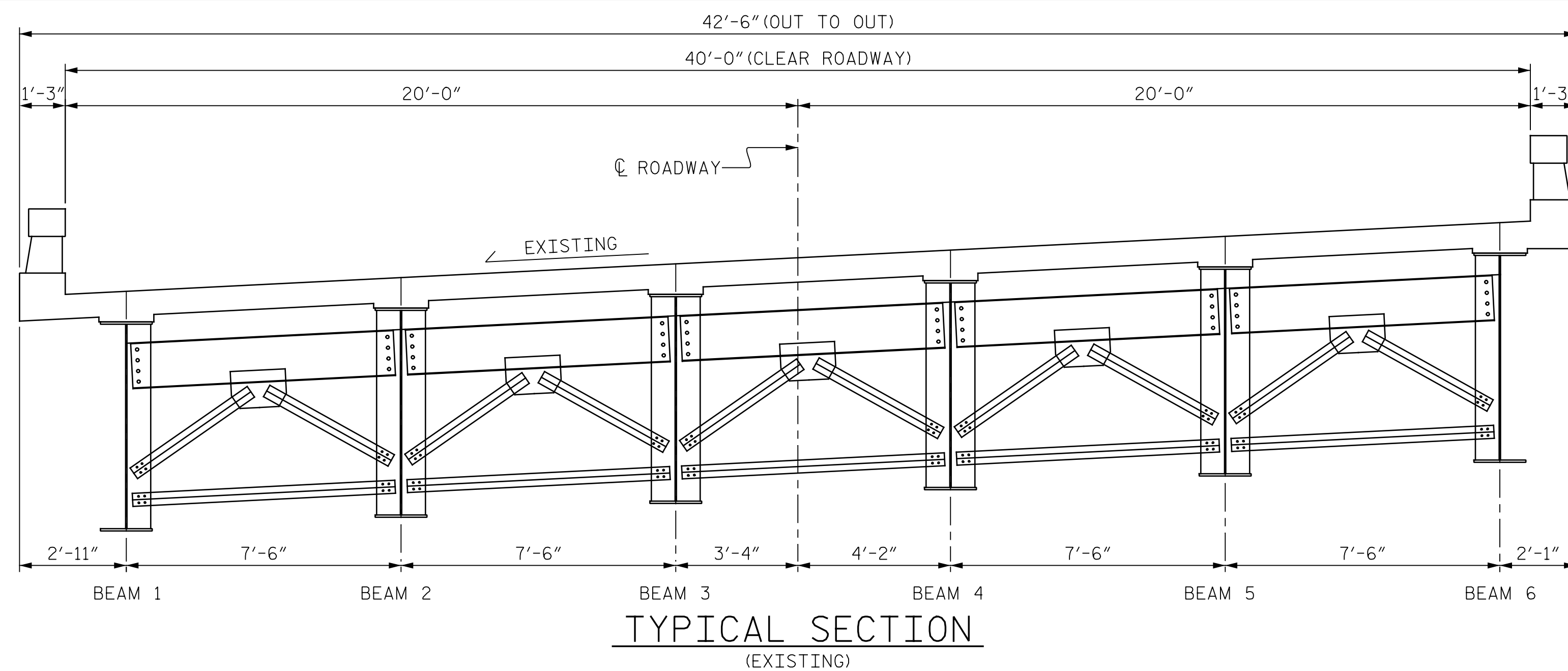
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

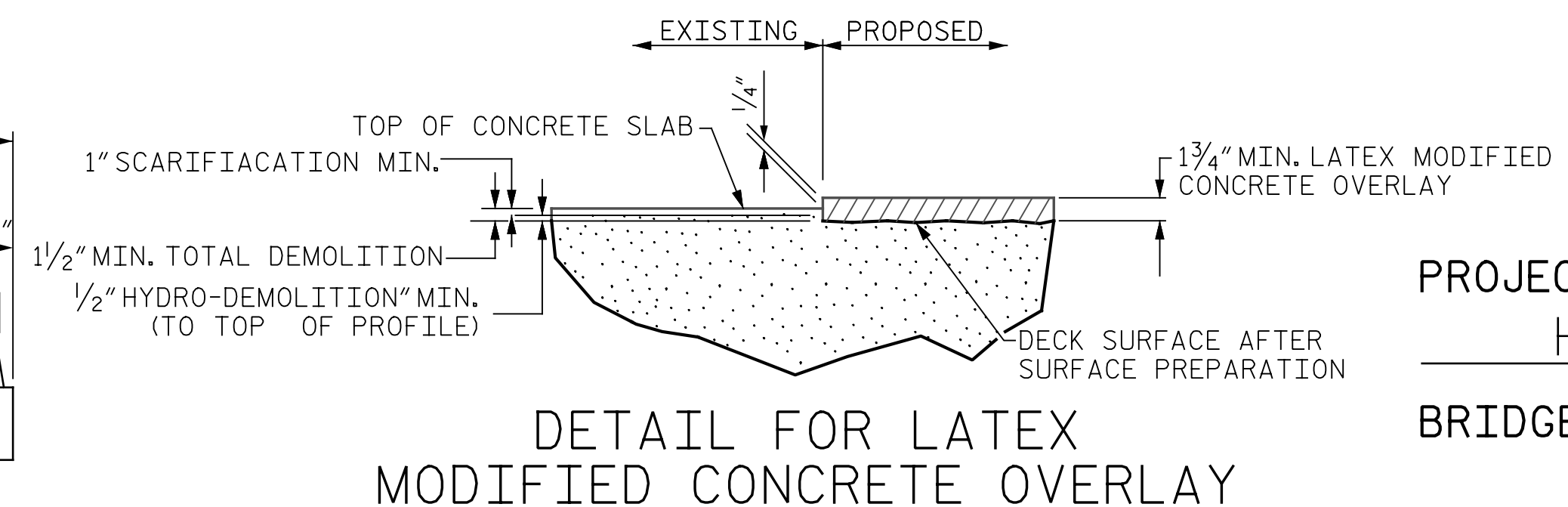
GENERAL DRAWING
BRIDGE #98 ON NC209
OVER PIGEON RIVER

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-23	
1			3			TOTAL SHEETS 142	
2			4				

DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : J. REISINGER DATE : 2/2018



PAY LIMITS FOR OVERLAY BID ITEMS



NOTE:

SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING
AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE
PREPARATION AND LMC PLACEMENT.

WHEN PREPARING THE SURFACE FOR AN LMC OVERLAY ADJACENT TO A PREVIOUSLY PLACED LMC STAGE, THE PREVIOUSLY PLACED LMC SHALL BE REMOVED FOR A DISTANCE OF 4 INCHES FROM THE EDGE OF THE LMC. THE SURFACE OF THE NEW STAGE AREA, ALONG WITH THE 4 INCH OVERLAY AREA, SHALL BE PREPARED AS PER THE OVERLAY SURFACE PREPARATION SPECIAL PROVISION. NEW LMC SHALL BE PLACED IN THE 4 INCH OVERLAP AS PART OF THE NEW LMC STAGE PLACEMENT.


DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : J. REISINGER DATE : 2/2018

PLANS PREPARED BY: **Gannett Fleming** *Excellence Delivered **As Promised***

2610 Wycliff Road
Suite 102
Raleigh NC 27607-307
(919) 420-7660

NC Lic. No. F-0270

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DocuSigned by:
Eric B. Nelson Jr. 4/3/2018
 BA9F917E2D7044A.

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
 BRIDGE NO. 98

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & OVERLAY DETAILS

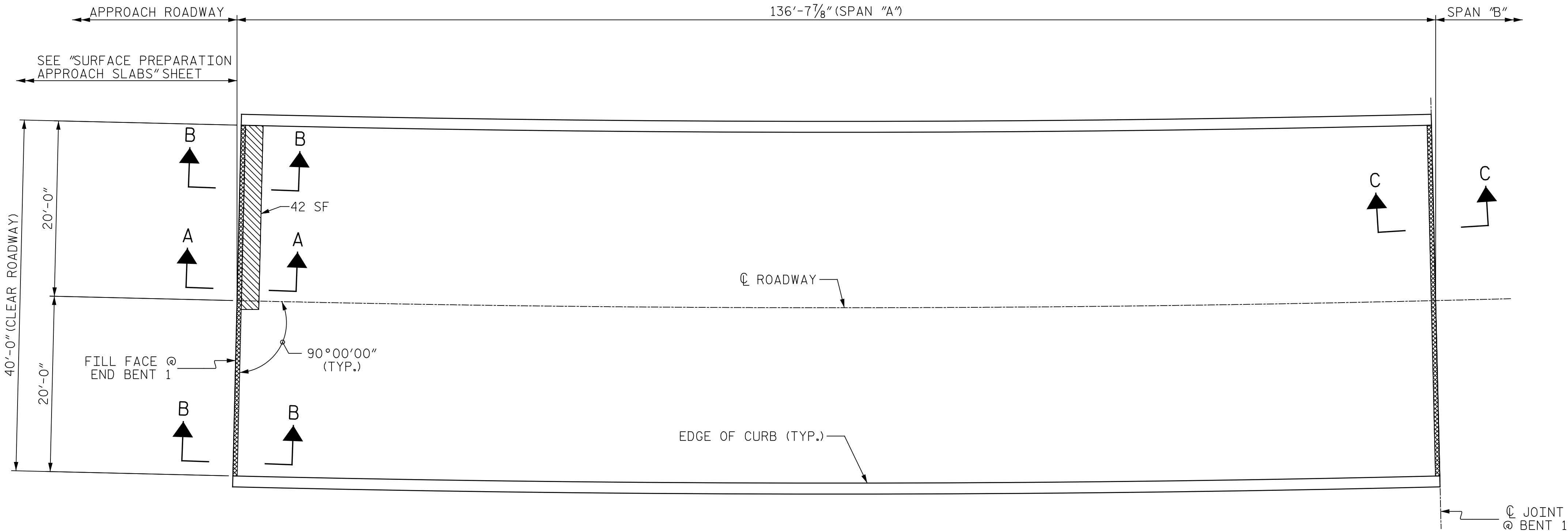
REVISIONS						SHEET NO. S-24
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

SUMMARY OF QUANTITIES FOR SPAN "A"		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	608 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	608 SY	
CLASS II SURFACE PREPARATION	4.7 SY	
BRIDGE JOINT DEMOLITION	40 SF	
GROOVING BRIDGE DECK	5009 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS II WITH POTENTIAL BLOW THROUGH
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION



PLAN OF SPAN "A"

(SEE SHEET NO. S-29 AND S-30 FOR SECTIONS A-A, B-B, AND C-C)

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
BRIDGE NO. 98



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4/3/2018

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SURFACE PREPARATION SPAN "A"					
REVISIONS					SHEET NO. S-25
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS 142					

DRAWN BY : T. FORD DATE : 2/2018
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PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*

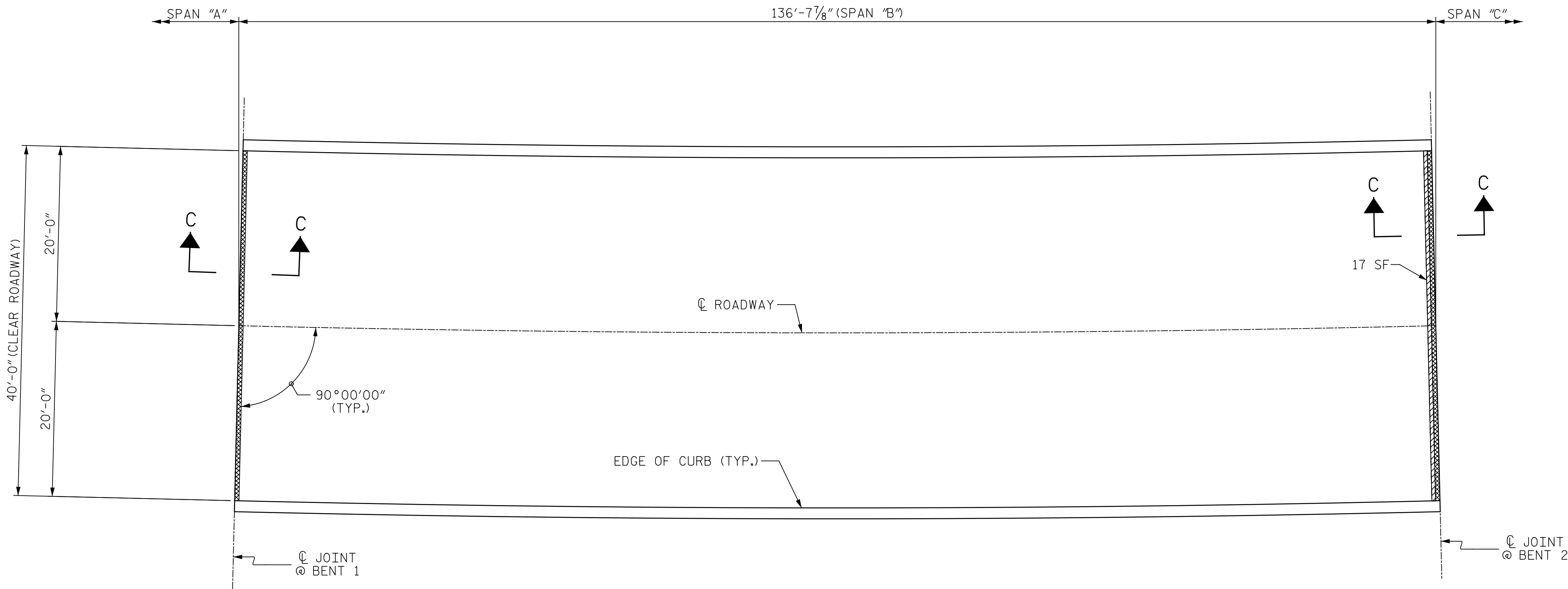
2610 Wycliff Road
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Raleigh, NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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FINAL UNLESS ALL
SIGNATURES COMPLETED

SUMMARY OF QUANTITIES FOR SPAN ``B``		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	608 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	608 SY	
CLASS II SURFACE PREPARATION	1.9 SY	
BRIDGE JOINT DEMOLITION	40 SF	
GROOVING BRIDGE DECK	5009 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.



- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS II WITH POTENTIAL BLOW THROUGH
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

PLAN OF SPAN ``B``
(SEE SHEET NO. S-30 FOR SECTIONS C-C)

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
BRIDGE NO. 98



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Eric B. Nelson Jr.
4/3/2018

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SURFACE PREPARATION SPAN ``B``					
REVISIONS					SHEET NO. S-26
NO.	BY:	DATE:	NO.	BY:	DATE:
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2			4		
TOTAL SHEETS 142					

DRAWN BY : T. FORD DATE : 2/2018
CHECKED BY : J. REISINGER DATE : 2/2018

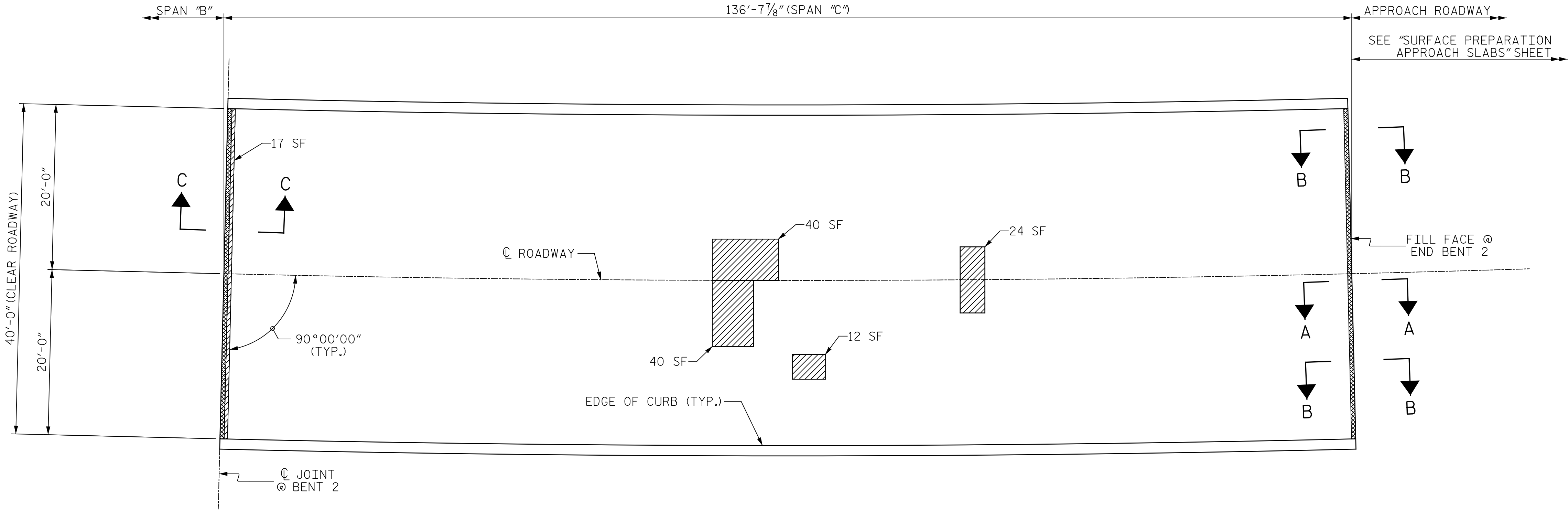
PLANS PREPARED BY:
 Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

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SUMMARY OF QUANTITIES FOR SPAN ``C``		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	608 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	608 SY	
CLASS II SURFACE PREPARATION	14.8 SY	
BRIDGE JOINT DEMOLITION	40 SF	
GROOVING BRIDGE DECK	5009 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.



- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS II WITH POTENTIAL BLOW THROUGH
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

PLAN OF SPAN ``C``
(SEE SHEET NO. S-29 AND S-30 FOR SECTIONS A-A, B-B, AND C-C)

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
BRIDGE NO. 98



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4/3/2018

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SURFACE PREPARATION SPAN ``C``					
REVISIONS					SHEET NO. S-27
NO.	BY:	DATE:	NO.	BY:	DATE:
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2			4		
TOTAL SHEETS 142					

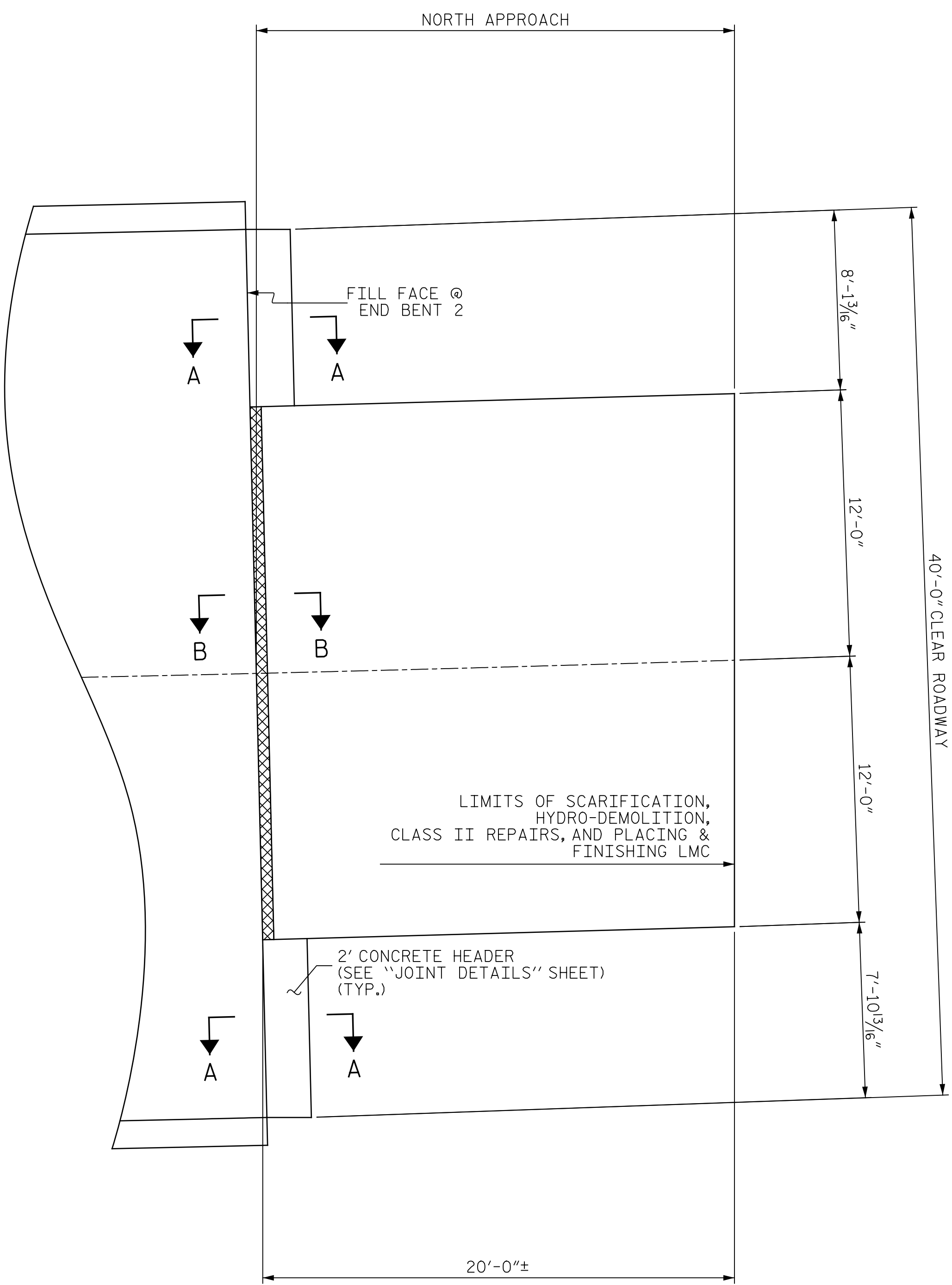
DRAWN BY : T. FORD DATE : 2/2018
CHECKED BY : J. REISINGER DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
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PLAN OF SOUTH APPROACH SLAB
(SEE SHEET NO. S-29 FOR SECTIONS A-A AND B-B)



PLAN OF NORTH APPROACH SLAB
(SEE SHEET NO. S-29 FOR SECTIONS A-A AND B-B)

SUMMARY OF QUANTITIES FOR SOUTH APP.		
	ESTIMATE	ACTUAL
SCARIFYING APPROACH SLAB	54 SY	
HYDRO-DEMOLITION OF APPROACH SLAB	54 SY	
CLASS II SURFACE PREPARATION	-	
BRIDGE JOINT DEMOLITION	12 SF	
GROOVING BRIDGE DECK	464 SF	
SUMMARY OF QUANTITIES FOR NORTH APP.		
	ESTIMATE	ACTUAL
SCARIFYING APPROACH SLAB	54 SY	
HYDRO-DEMOLITION OF APPROACH SLAB	54 SY	
CLASS II SURFACE PREPARATION	-	
BRIDGE JOINT DEMOLITION	12 SF	
GROOVING BRIDGE DECK	464 SF	

NOTES:
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

- SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK
- APPROX. AREA CLASS II SURFACE PREPARATION
- APPROX. AREA CLASS II WITH POTENTIAL BLOW THROUGH
- APPROX. AREA CLASS III SURFACE PREPARATION
- BRIDGE JOINT DEMOLITION

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
BRIDGE NO. 98



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4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

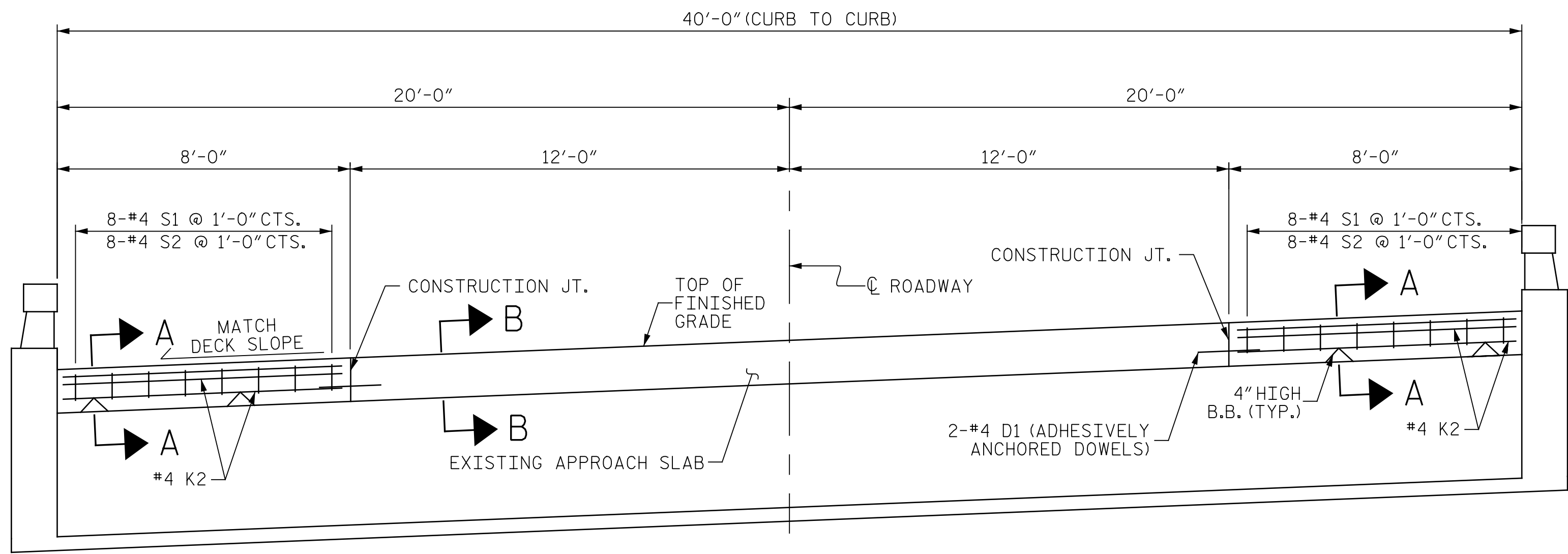
SURFACE PREPARATION
APPROACH SLABS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-28
1			3			TOTAL SHEETS
2			4			142

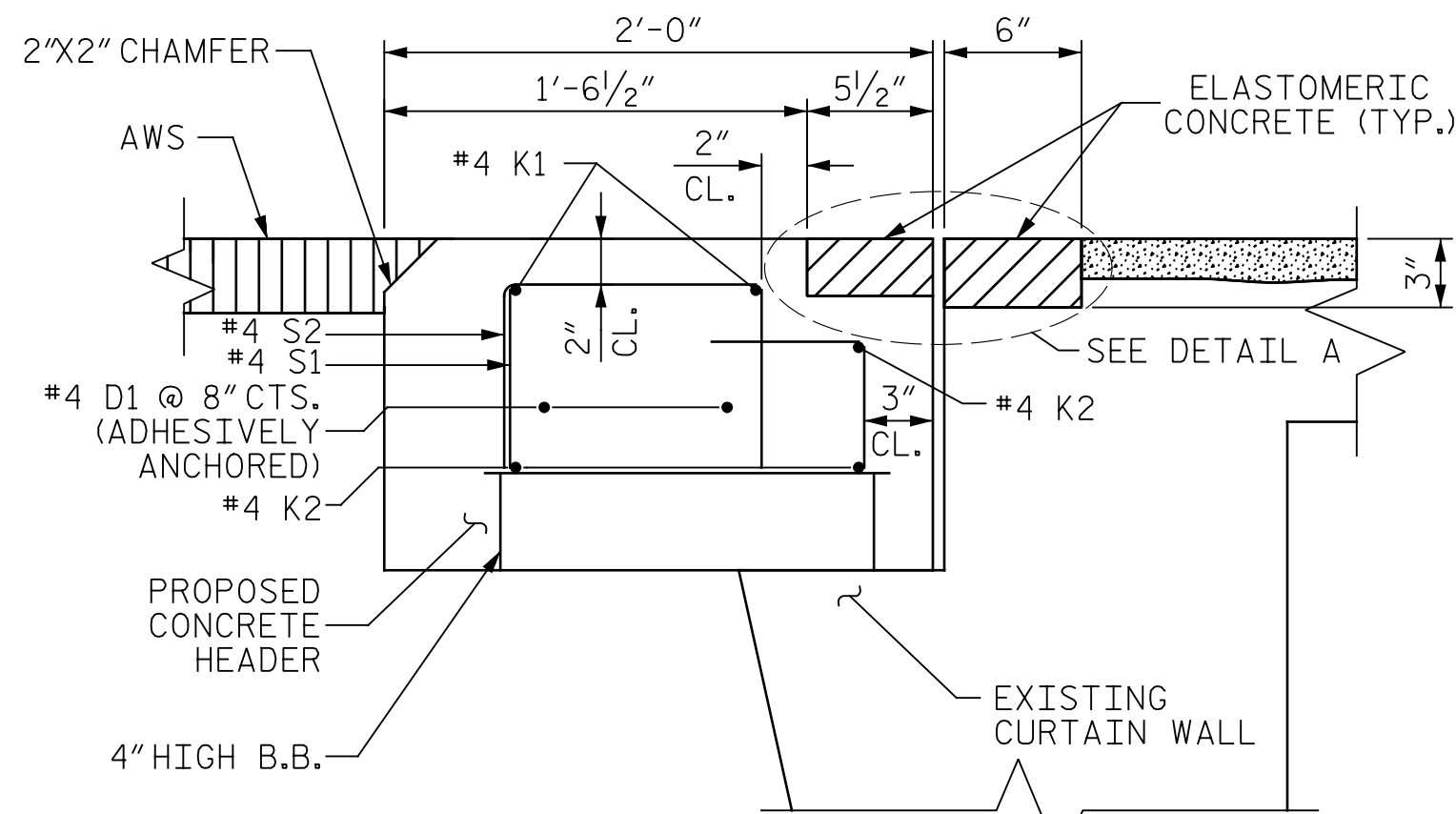
DRAWN BY : T. FORD DATE : 2/2018
CHECKED BY : J. REISINGER DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

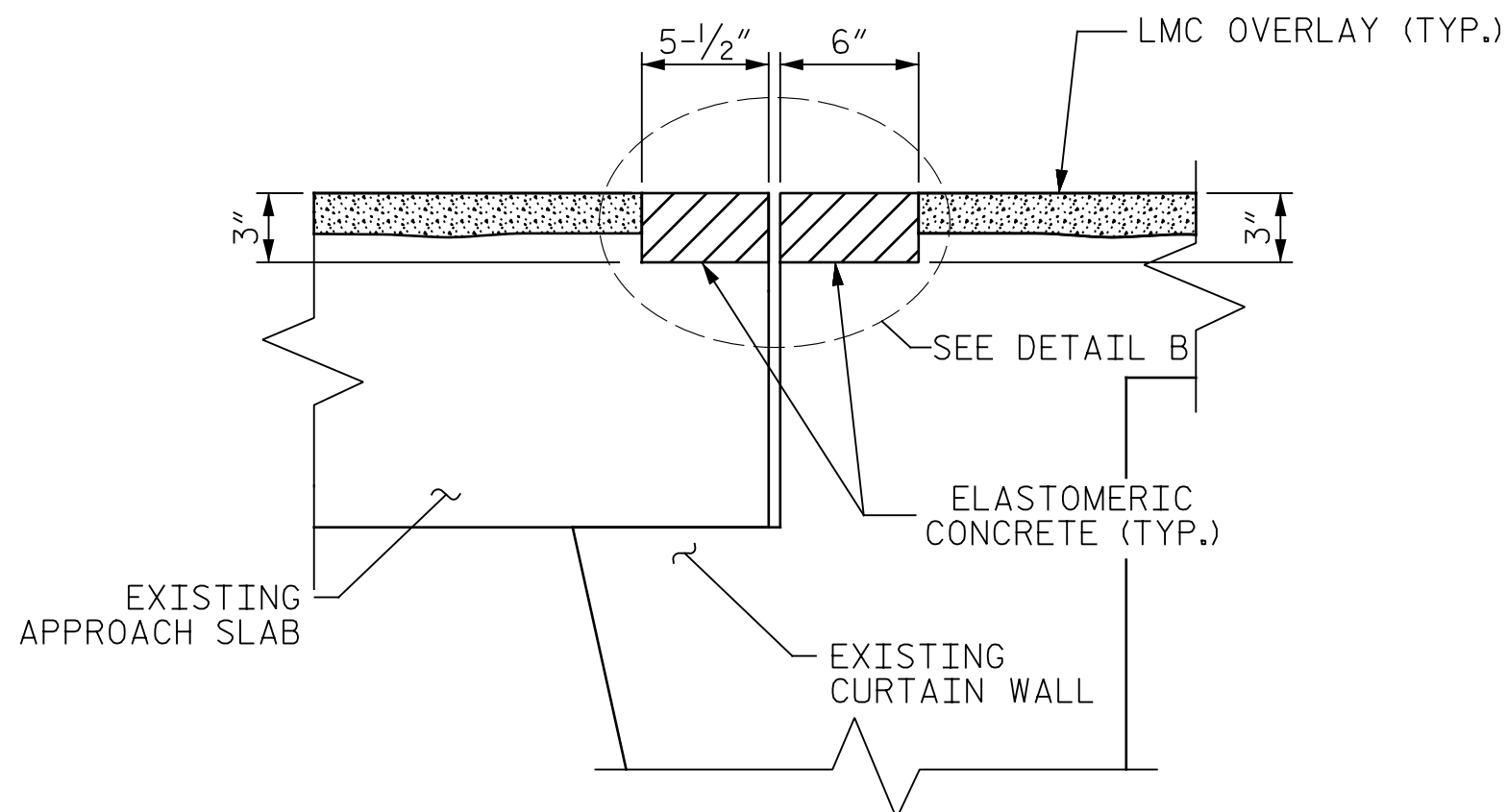
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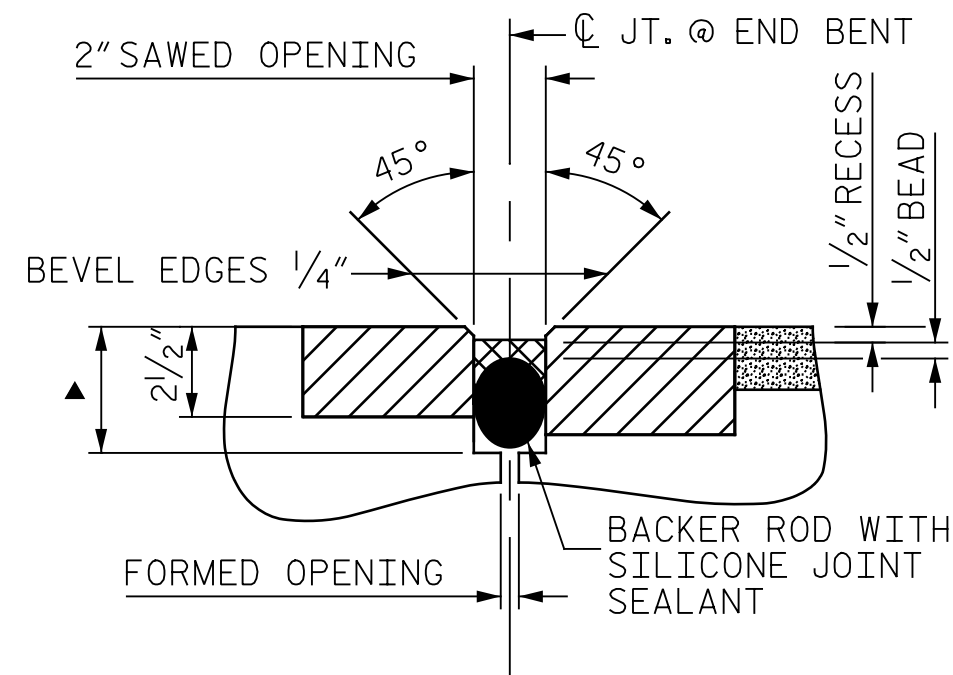
TYPICAL SECTION
(LOOKING STATION AHEAD)



SECTION A-A
(PROPOSED JOINT PRE-SAWED DIMENSIONS)

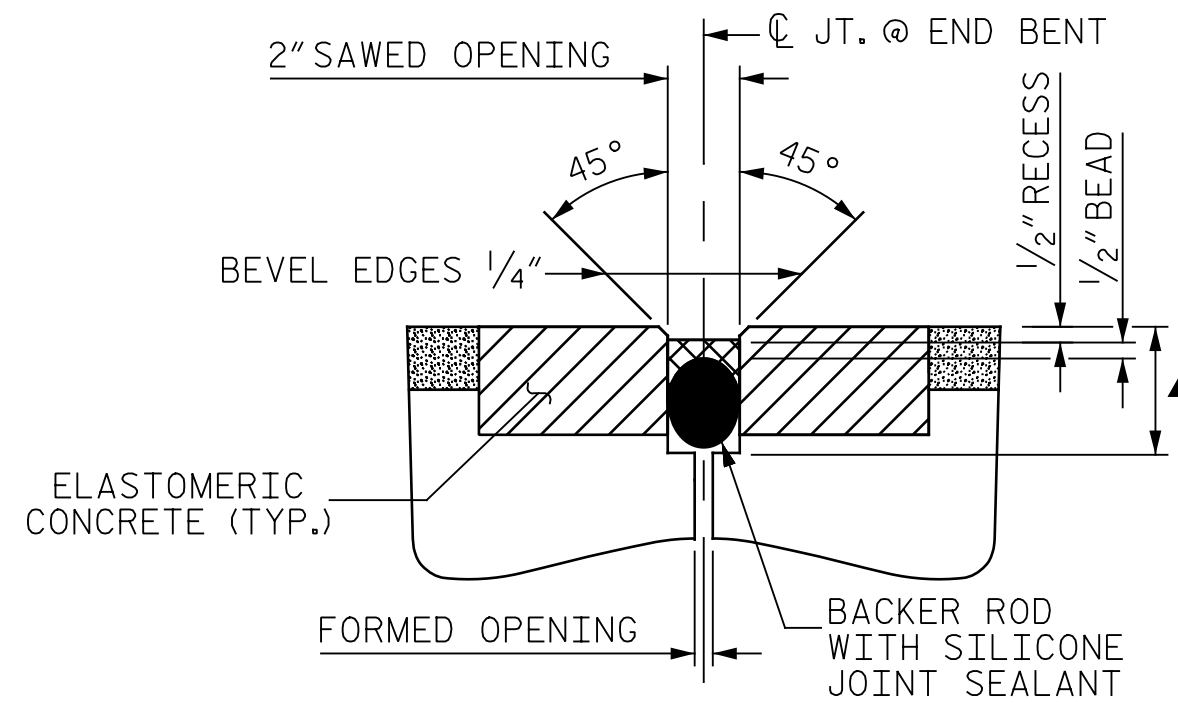


SECTION B-B
(PROPOSED JOINT PRE-SAWED DIMENSIONS)



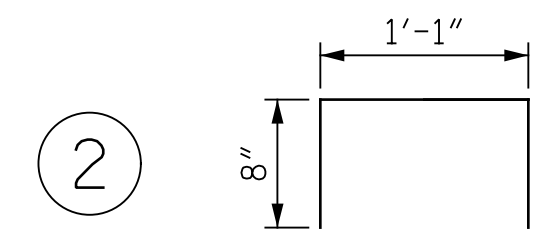
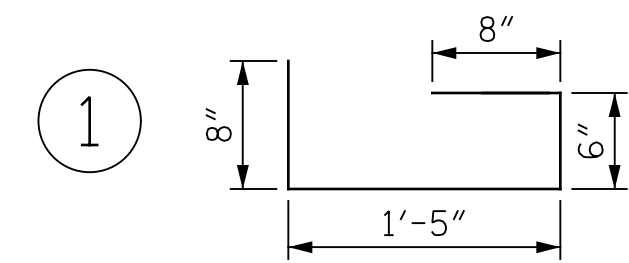
DETAIL A
(PROPOSED JOINT WITH SAWED DIMENSIONS)

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS



DETAIL B
(PROPOSED JOINT WITH SAWED DIMENSIONS)

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL FOR ONE END BENT JOINT

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
D1	4	#4	STR	1'-6"	4
K1	10	#4	STR	7'-6"	53
S1	16	#4	1	3'-3"	35
S2	40	#4	2	2'-5"	65

REINFORCING STEEL 154 LBS

CLASS AA CONCRETE 1.4 CY

ELASTOMERIC CONCRETE 9.6 CF

NOTES

THE INSTALLED SILICONE JOINT SEALS SHALL BE WATERTIGHT.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT FOR THE SILICONE JOINT SEAL IN LIEU OF SAWING THE JOINT.

FOR ADHESIVELY ANCHORED DOWELS, NO FIELD TESTING IS REQUIRED.

FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS.

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
BRIDGE NO. 98

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS



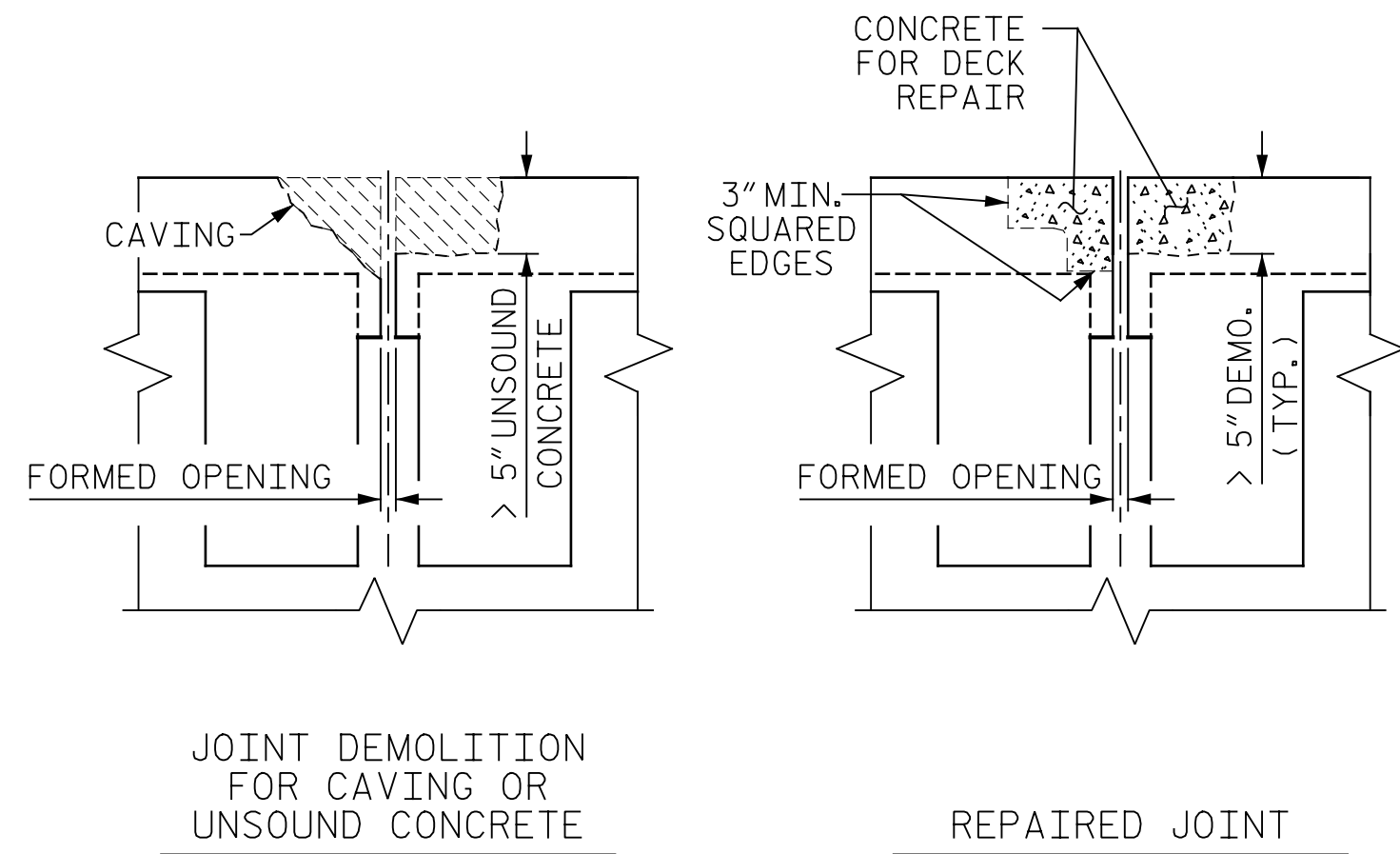
DocuSigned by:
Eric B. Nelson
4/3/2018

DRAWN BY : M. SPENCER DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
Gannett Fleming
Excellence Delivered As Promised
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REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-29	
1			3			TOTAL SHEETS	
2			4			142	



JOINT DEMOLITION
FOR CAVING OR
UN SOUND CONCRETE

REPAIRED JOINT

CONCRETE FOR DECK REPAIR DETAIL

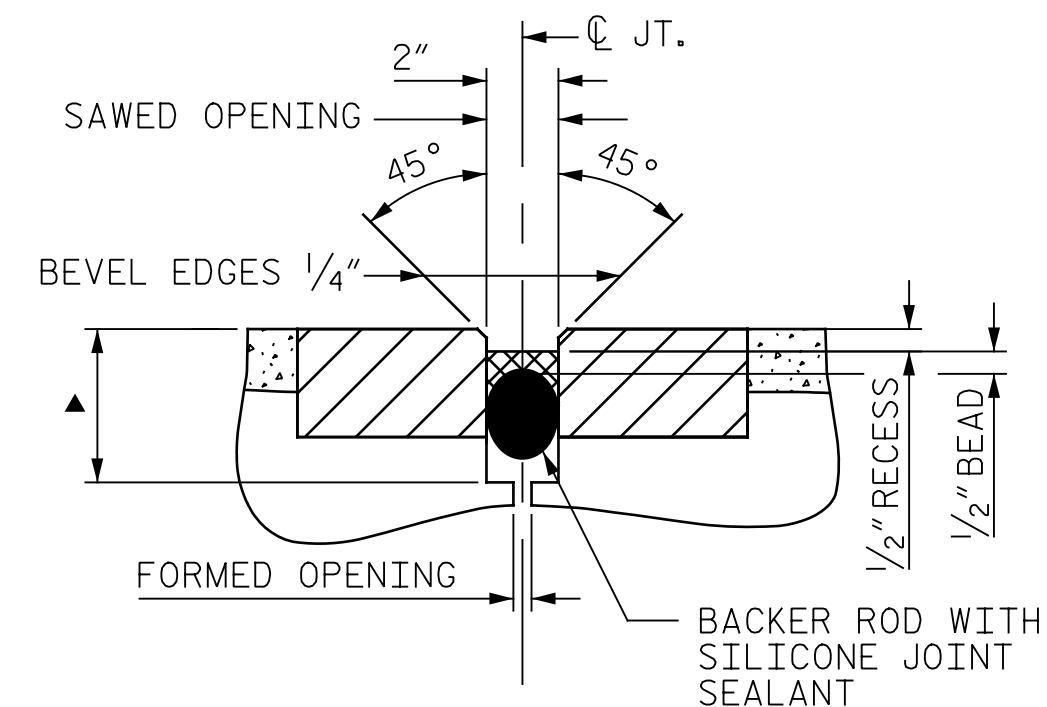
(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

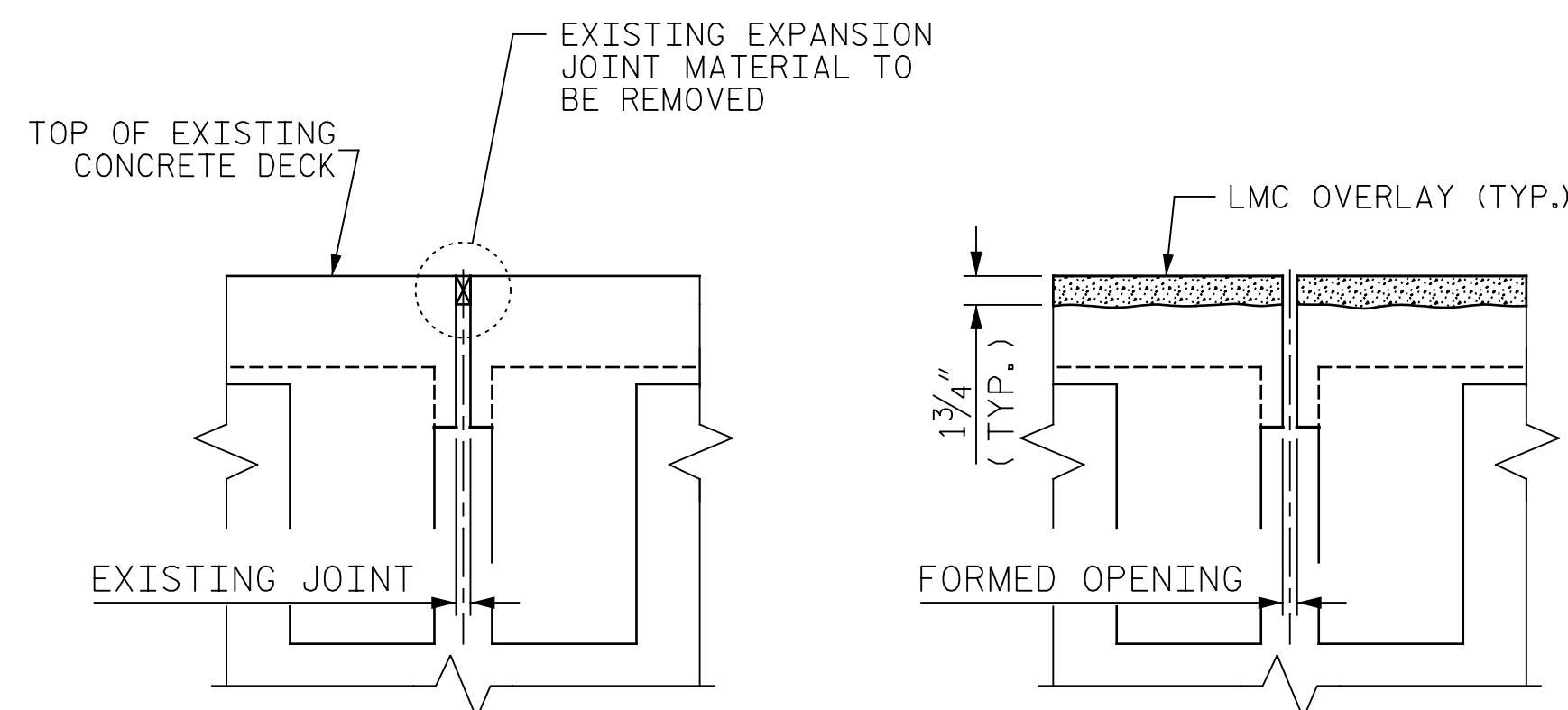
THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.



▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS

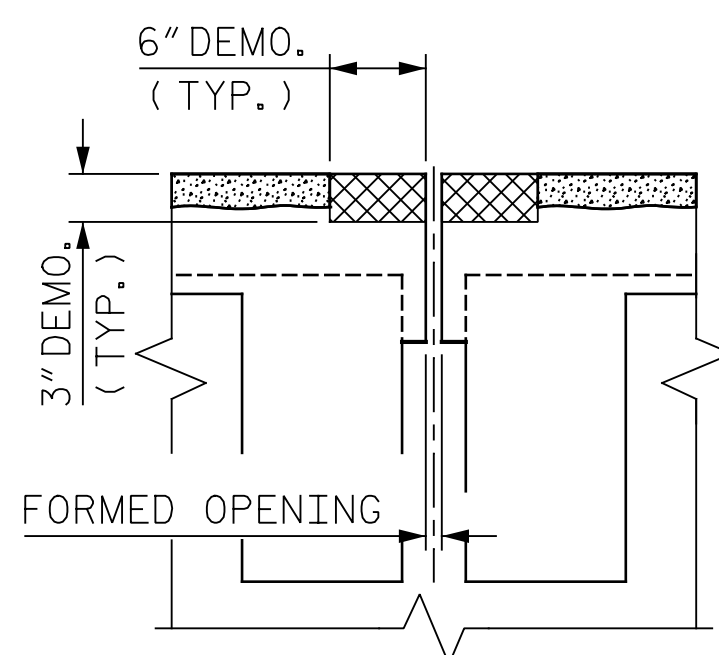
DETAIL A

(PROPOSED JOINT WITH SAWED DIMENSIONS)

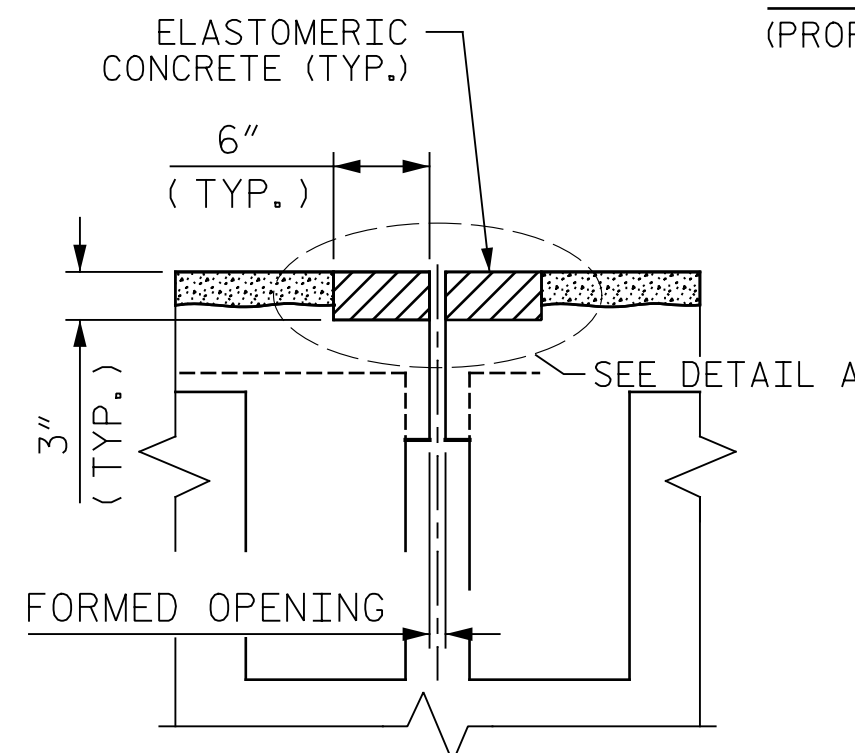


EXISTING

PROPOSED
LMC OVERLAY



MINIMUM
JOINT DEMOLITION

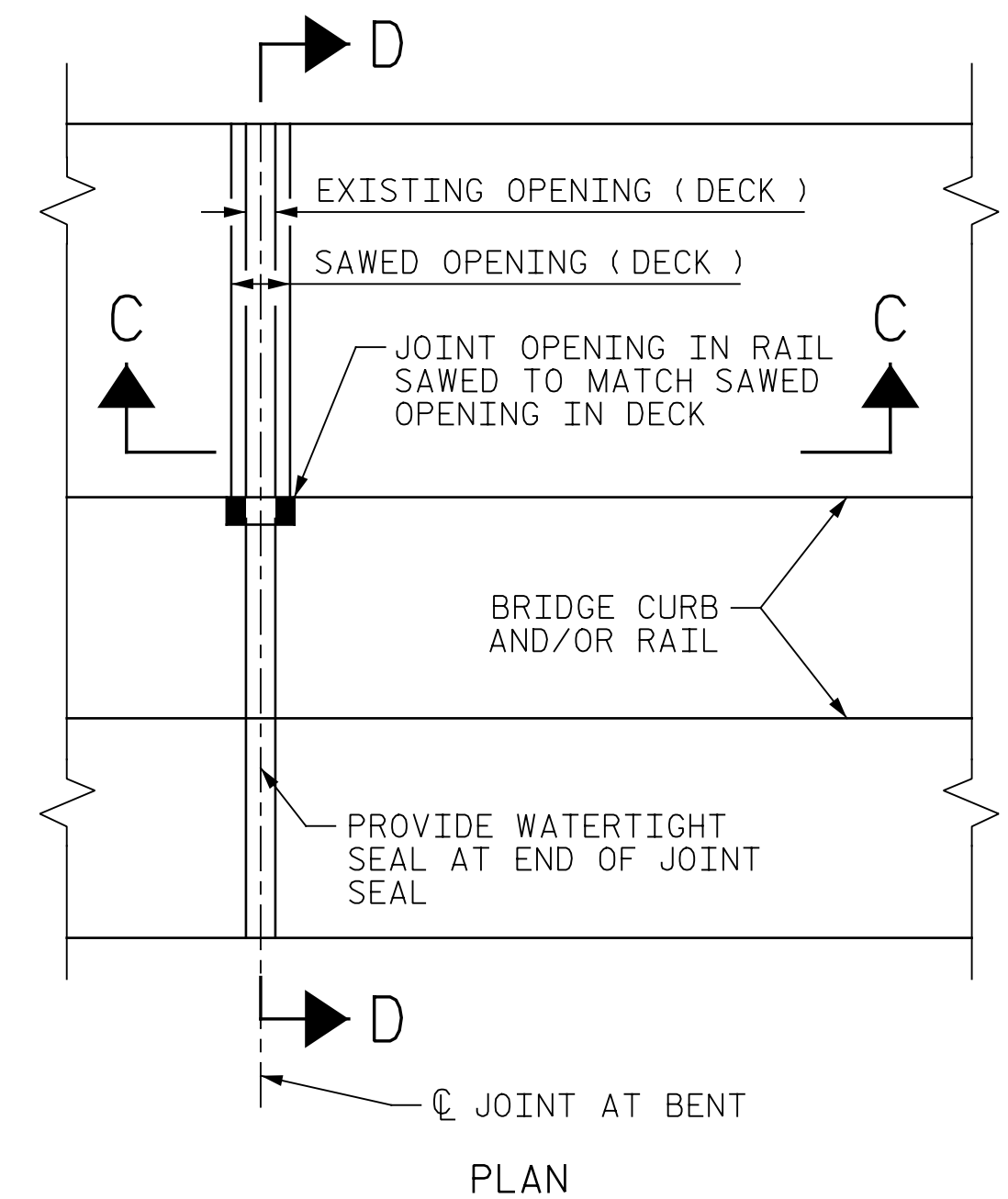


PROPOSED JOINT
PRE-SAWED DIMENSIONS

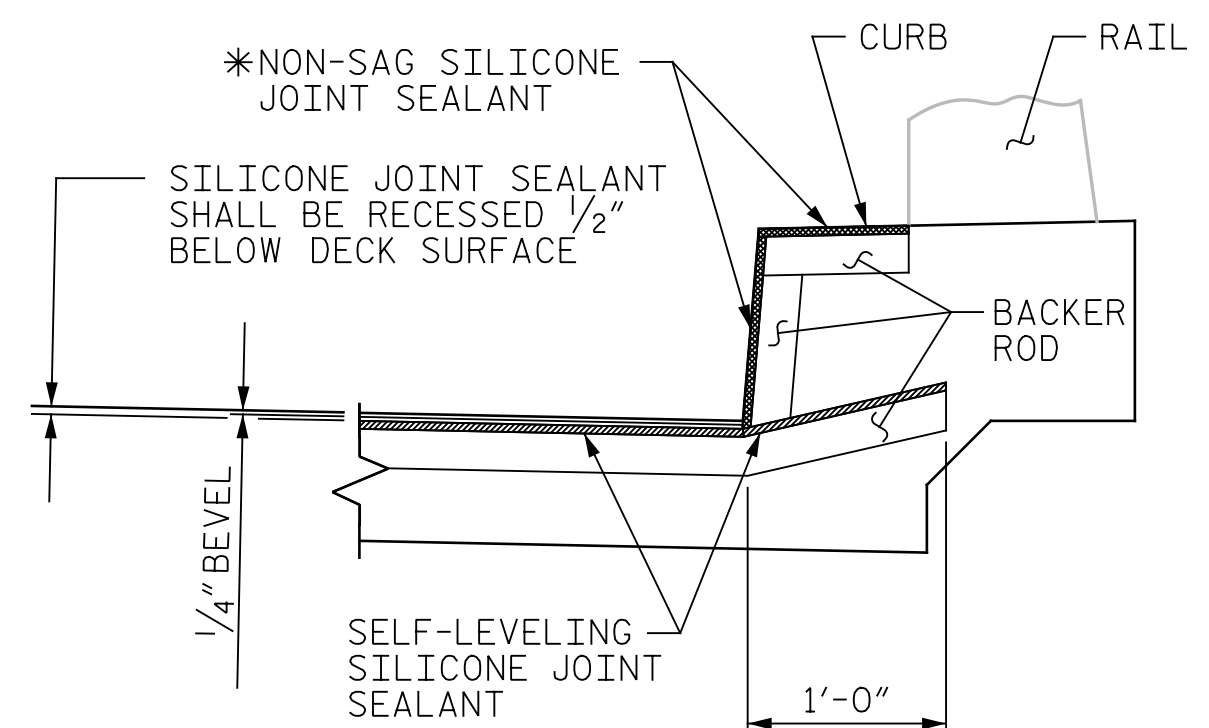
SECTION C-C

ELASTOMERIC CONCRETE	
BENT 1	10.1 CF
BENT 2	10.1 CF

HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT AND LEVEL, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC OR REPAIR CONCRETE. DEMOLISH BRIDGE JOINT TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE, NOT LATEX MODIFIED CONCRETE



*SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.

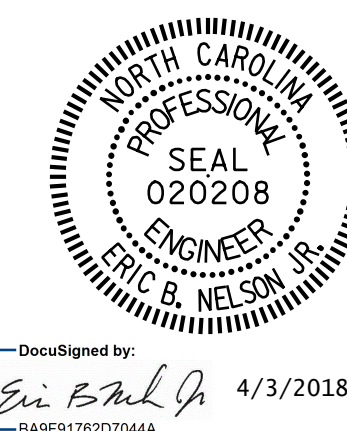


SECTION D-D

JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
BRIDGE NO. 98

SHEET 2 OF 2



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Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

REVISIONS						SHEET NO. S-30
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

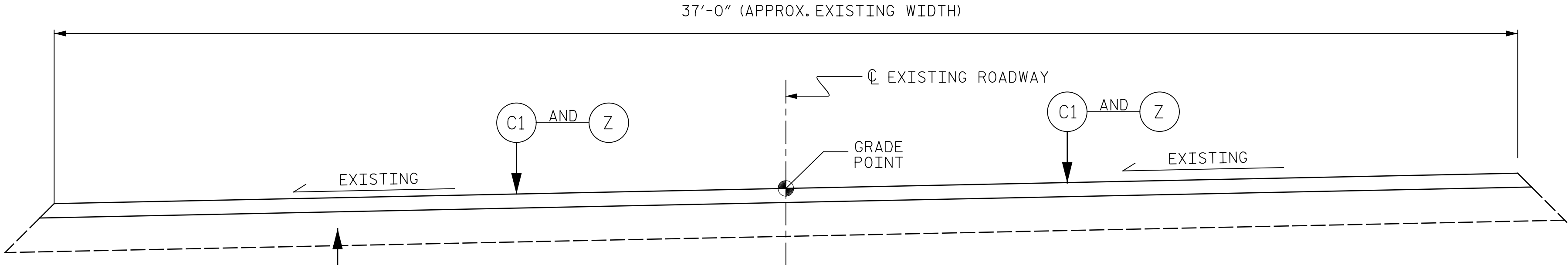
PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**

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PAVEMENT SCHEDULE	
C1	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
U	EXISTING PAVEMENT
Z	ASPHALT MILLING TO 1½" DEPTH.

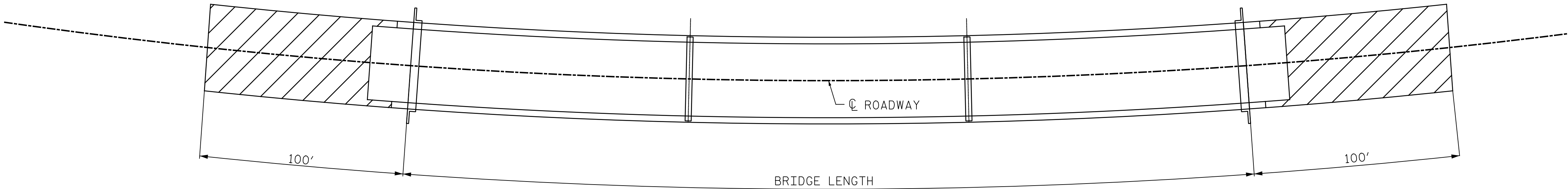
SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
INCIDENTAL MILLING	716 SQ. YDS.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	60 TONS	
ASPHALT BINDER FOR PLANT MIX	4 TONS	



TYPICAL PROPOSED ROADWAY SECTION

NOTES:

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1½" DEPTH OF NEW ASPHALT PAVEMENT. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION TO THE APPROACH SLABS, AS SHOWN. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1½" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVEMENT.



PLAN

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
BRIDGE NO. 98



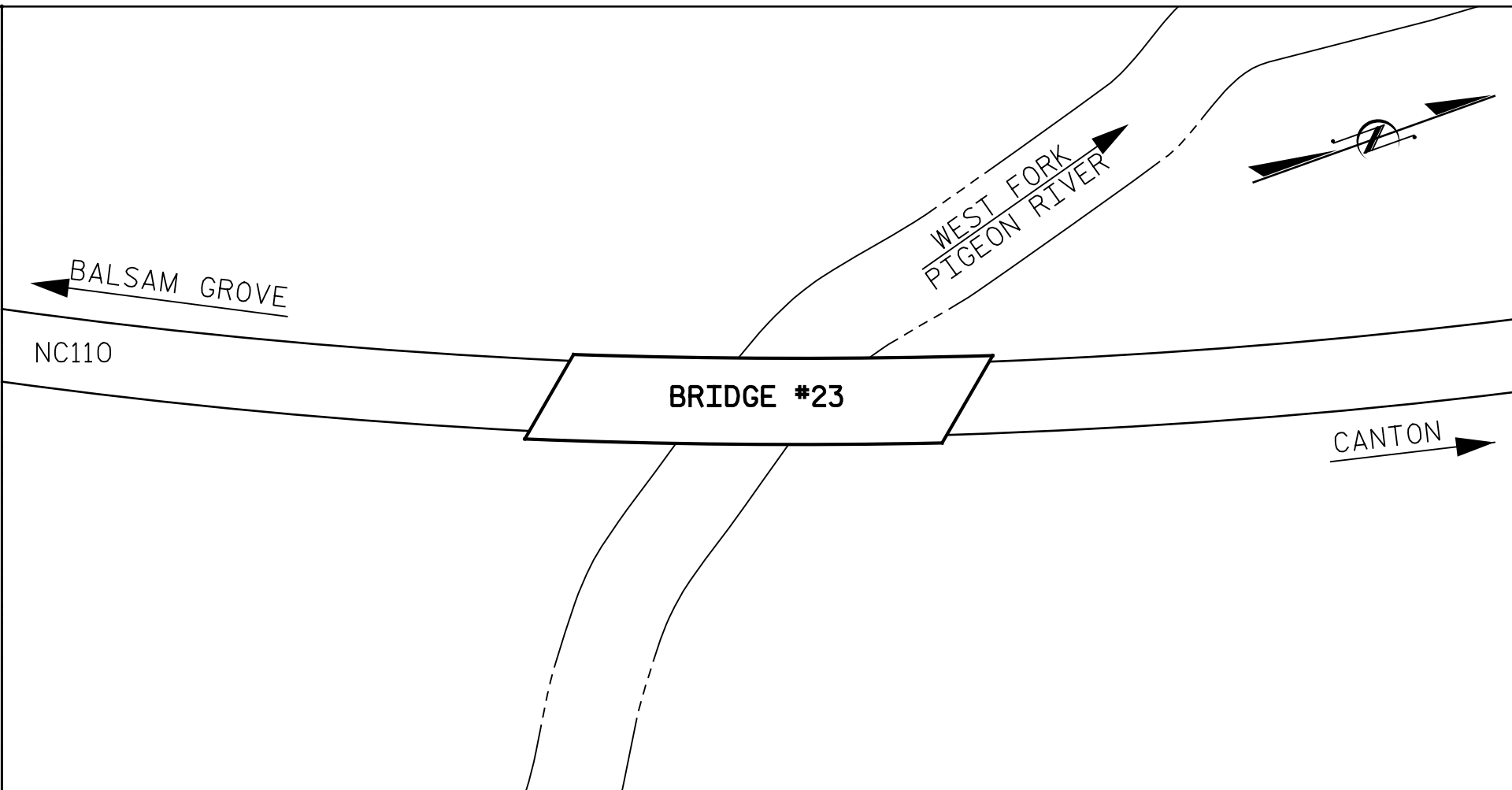
DocuSigned by:
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4/3/2018

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
APPROACH MILLING AND TYPICAL ROADWAY SECTIONS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO.					S-31
TOTAL SHEETS					142

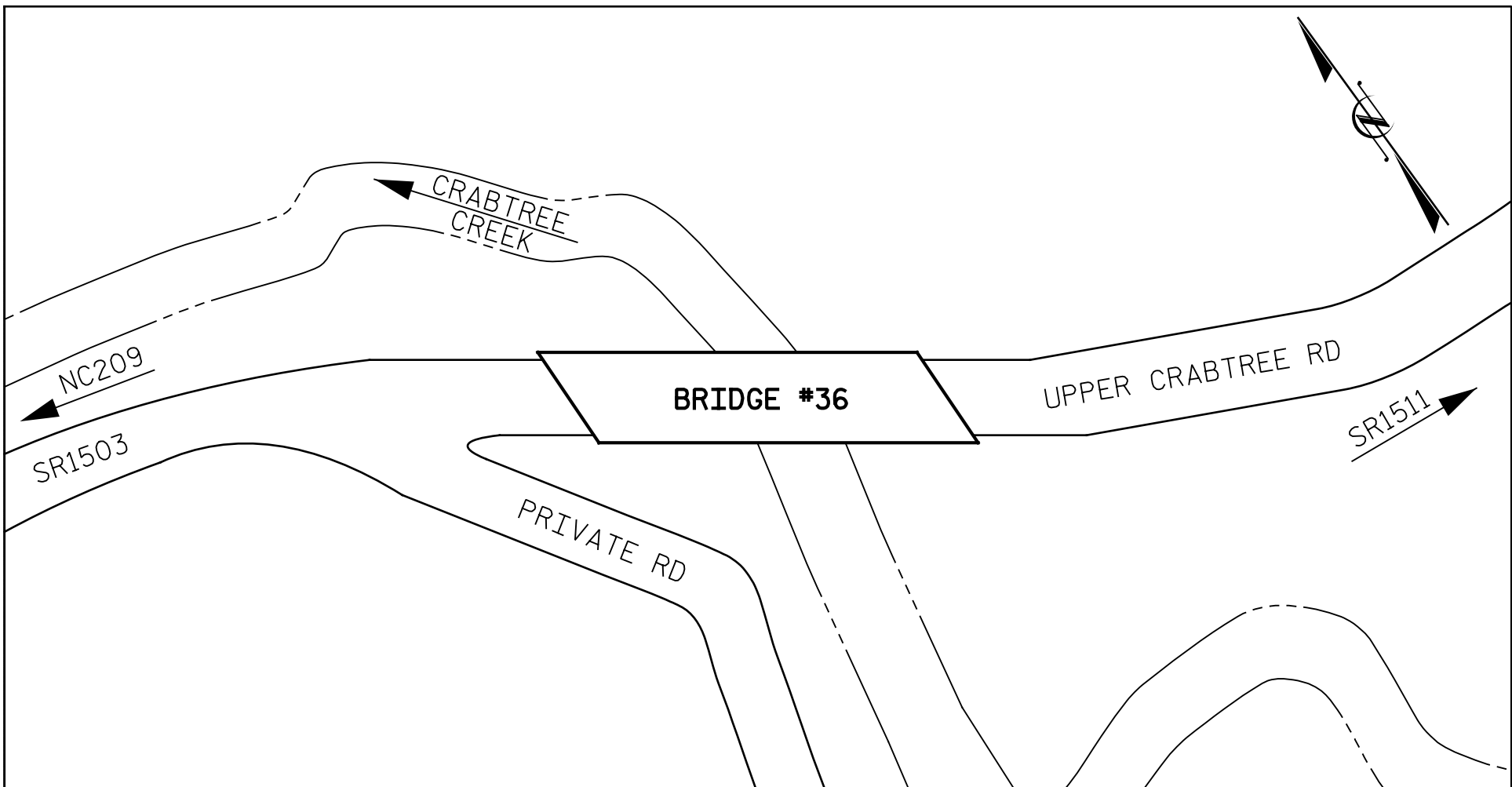
DRAWN BY : A. B. PRIDGEN DATE : 02/2018
CHECKED BY : E. NELSON DATE : 02/2018

PLANS PREPARED BY:
Gannett Fleming
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
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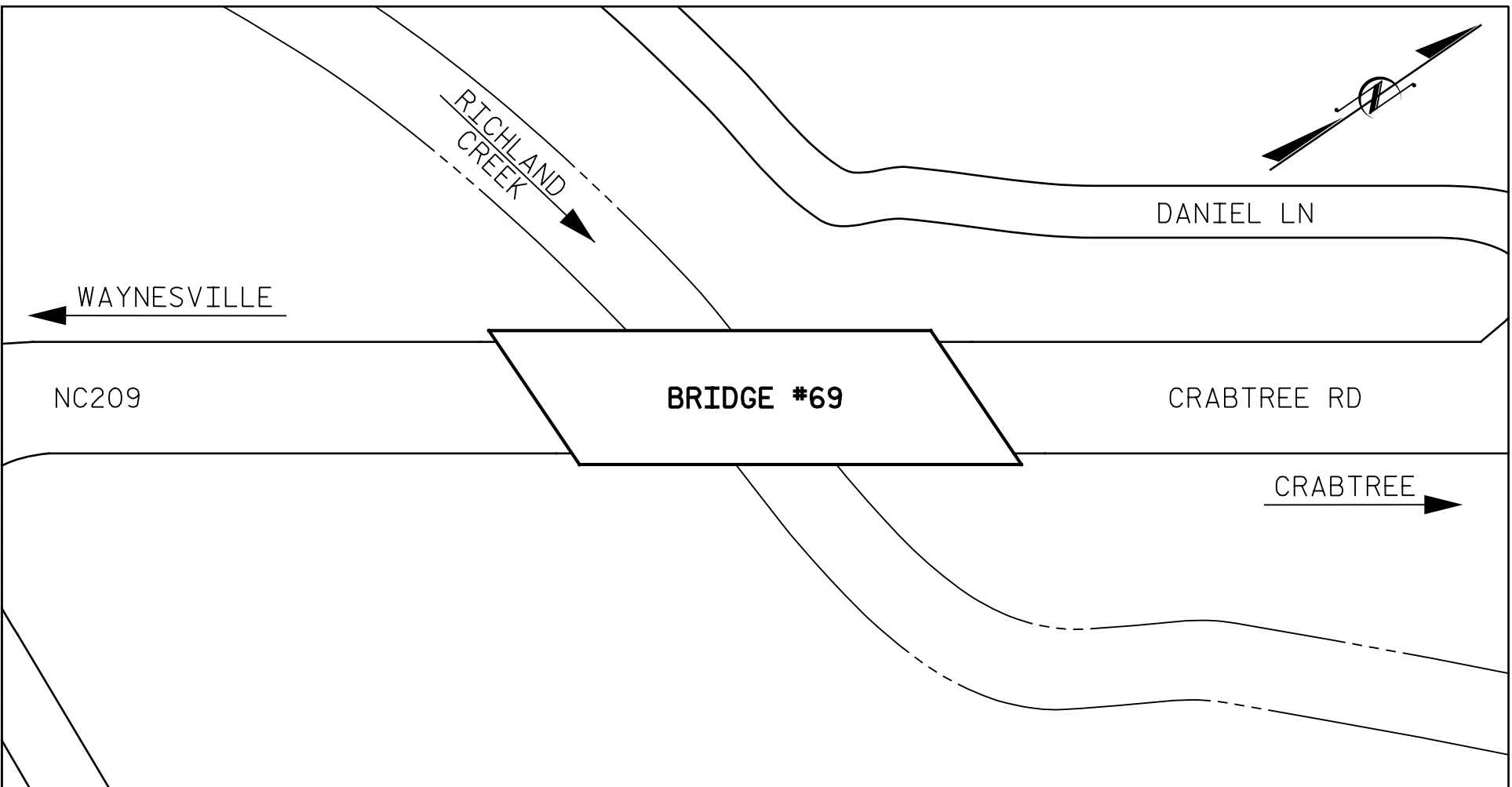
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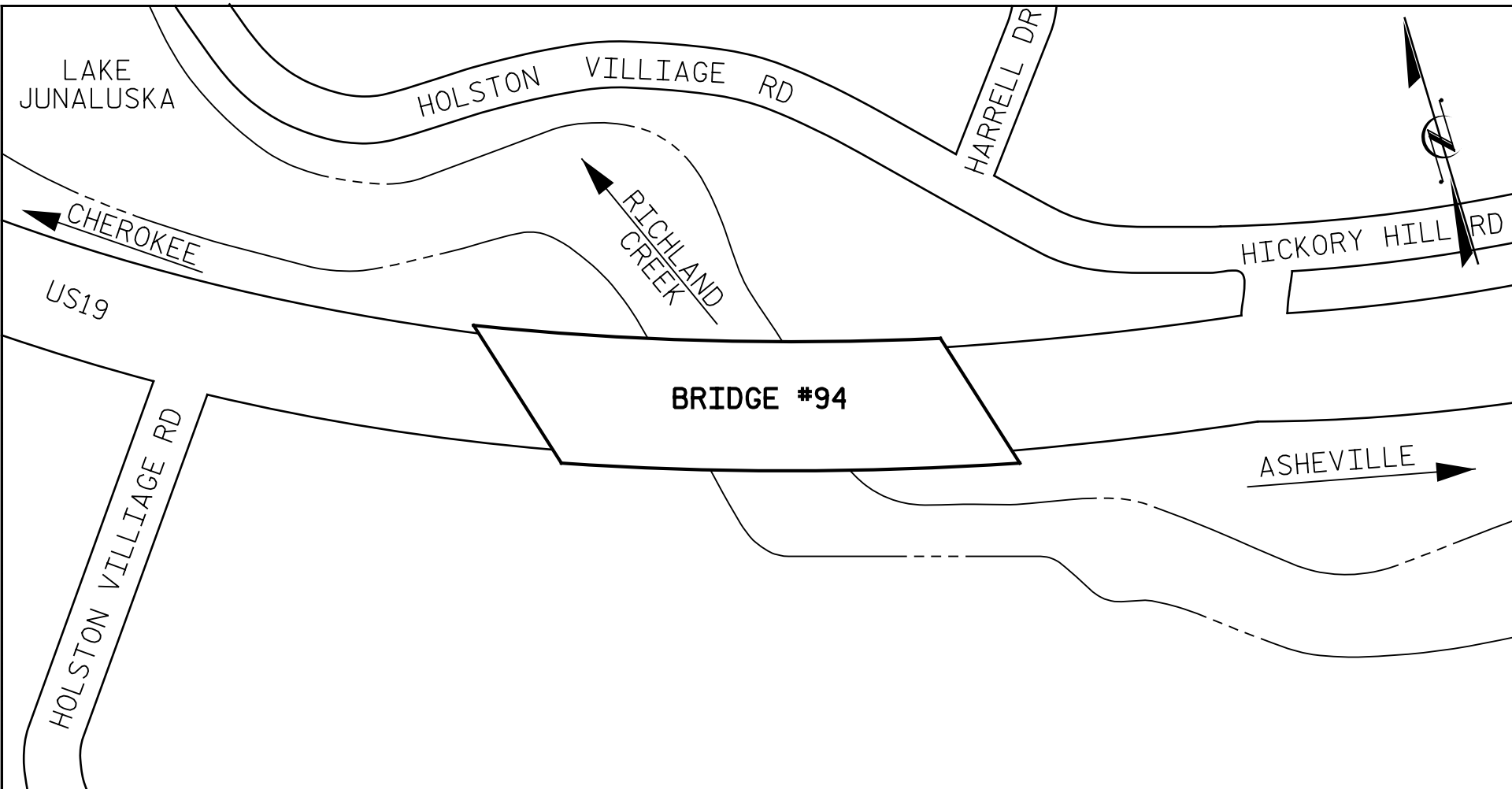
BRIDGE #23



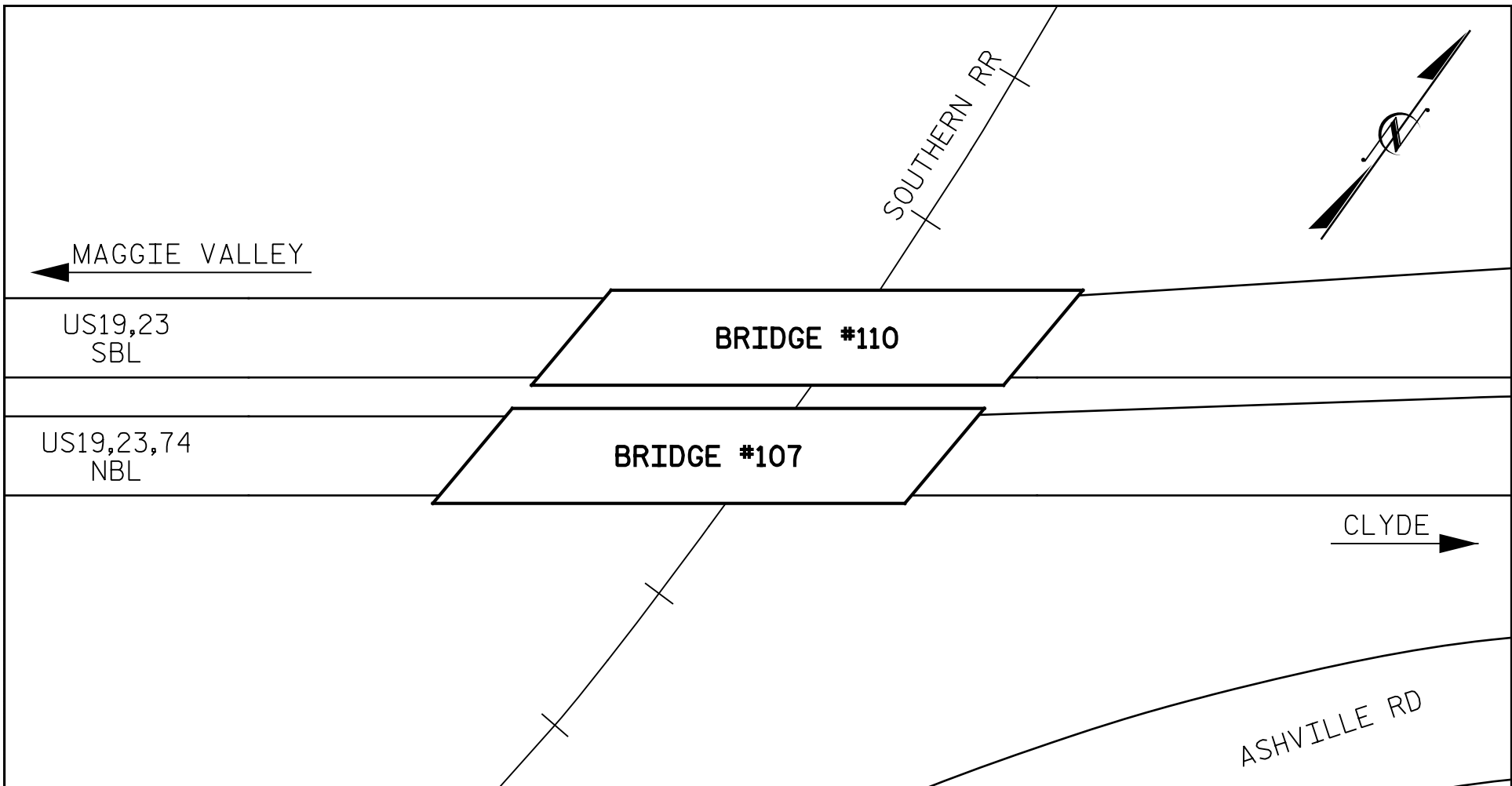
BRIDGE #36



BRIDGE #69



BRIDGE #94



BRIDGE #107 AND #110

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

GENERAL NOTES

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR SYNTHETIC RUBBER EXPANSION JOINT SEAL, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR EXPANSION JOINT SEAL REPAIR, SEE SPECIAL PROVISIONS.

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY



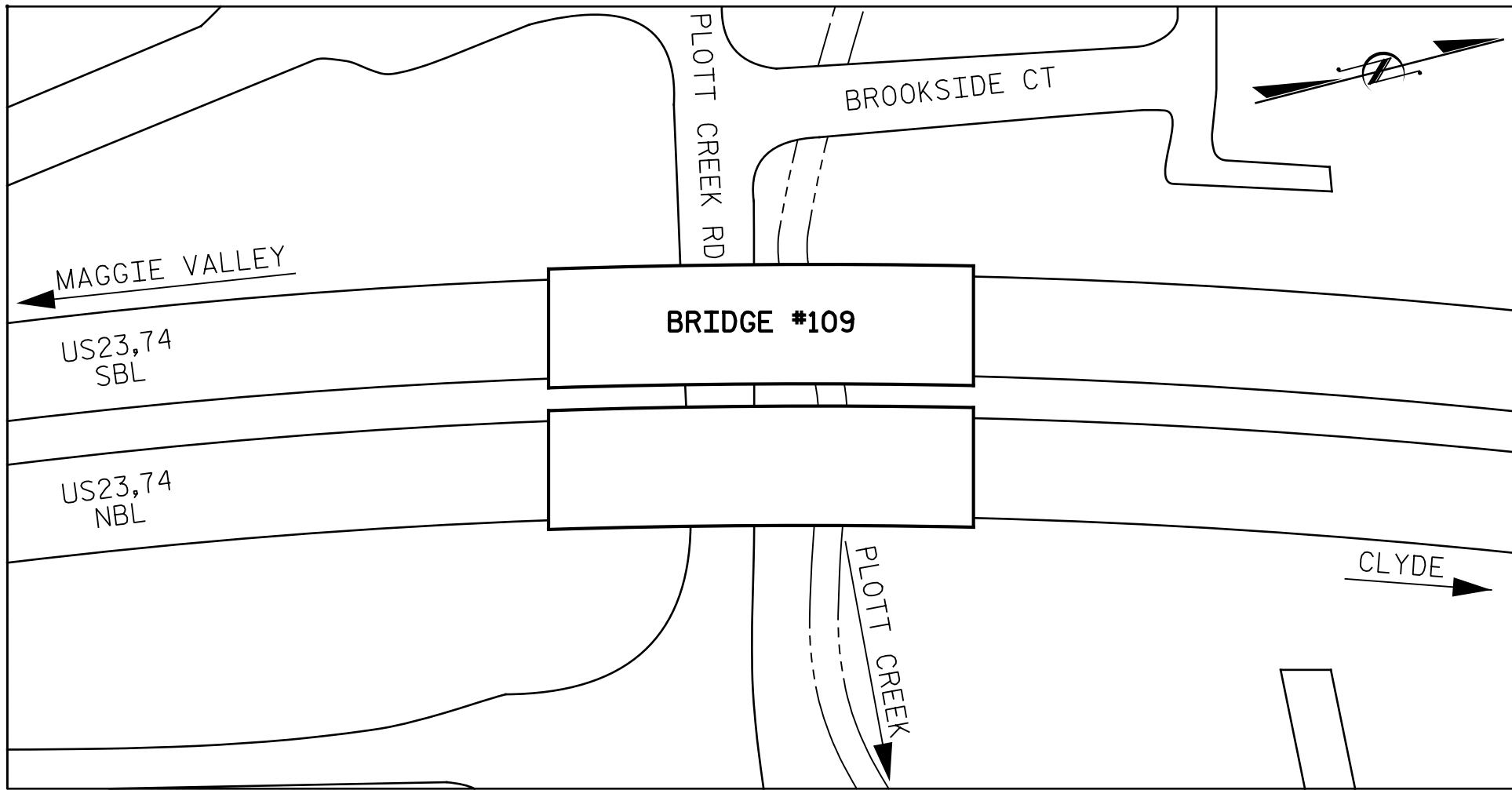
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Eric B. Nelson
4/3/2018

DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

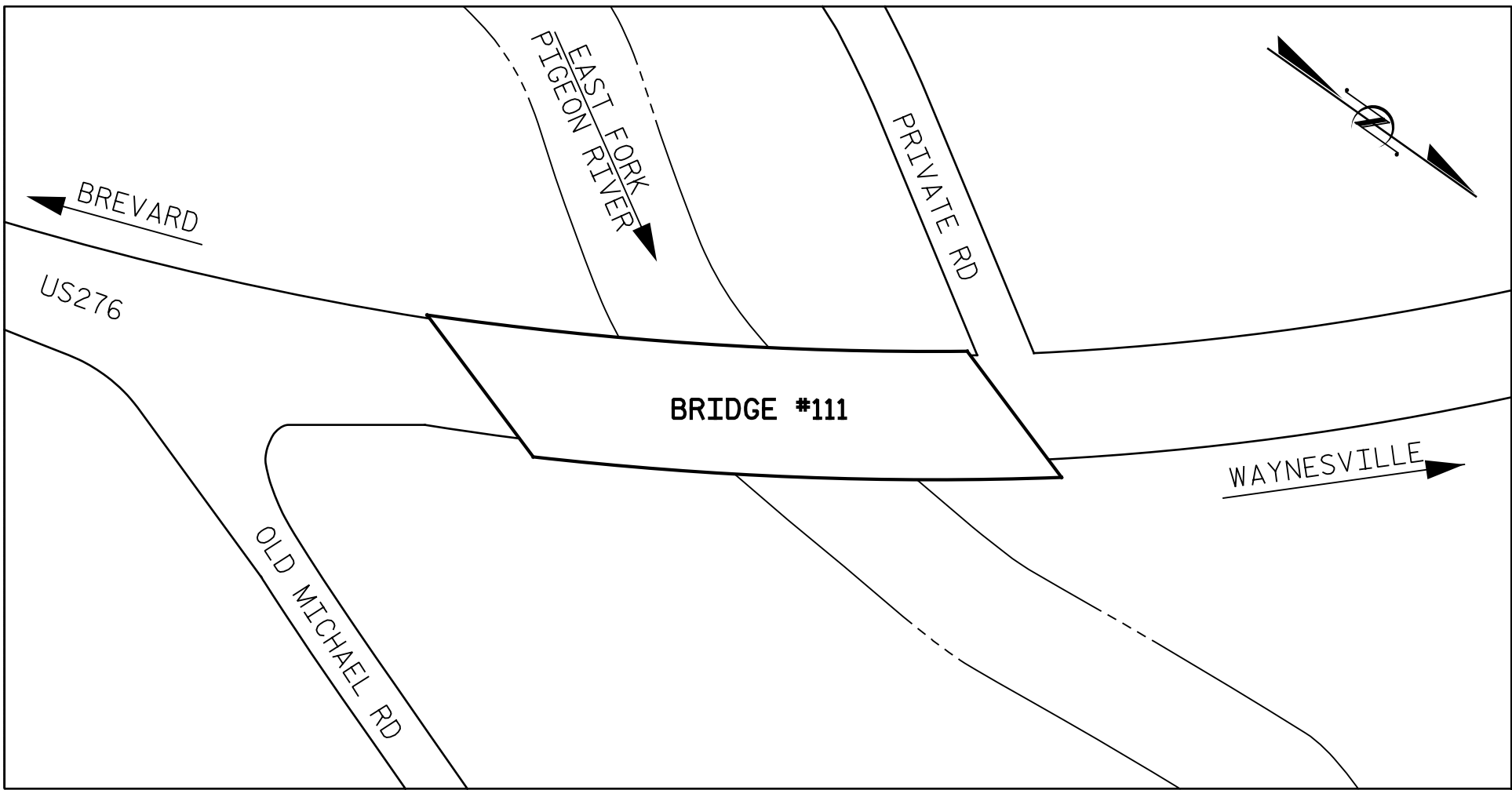
PLANS PREPARED BY:
Gannett Fleming
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

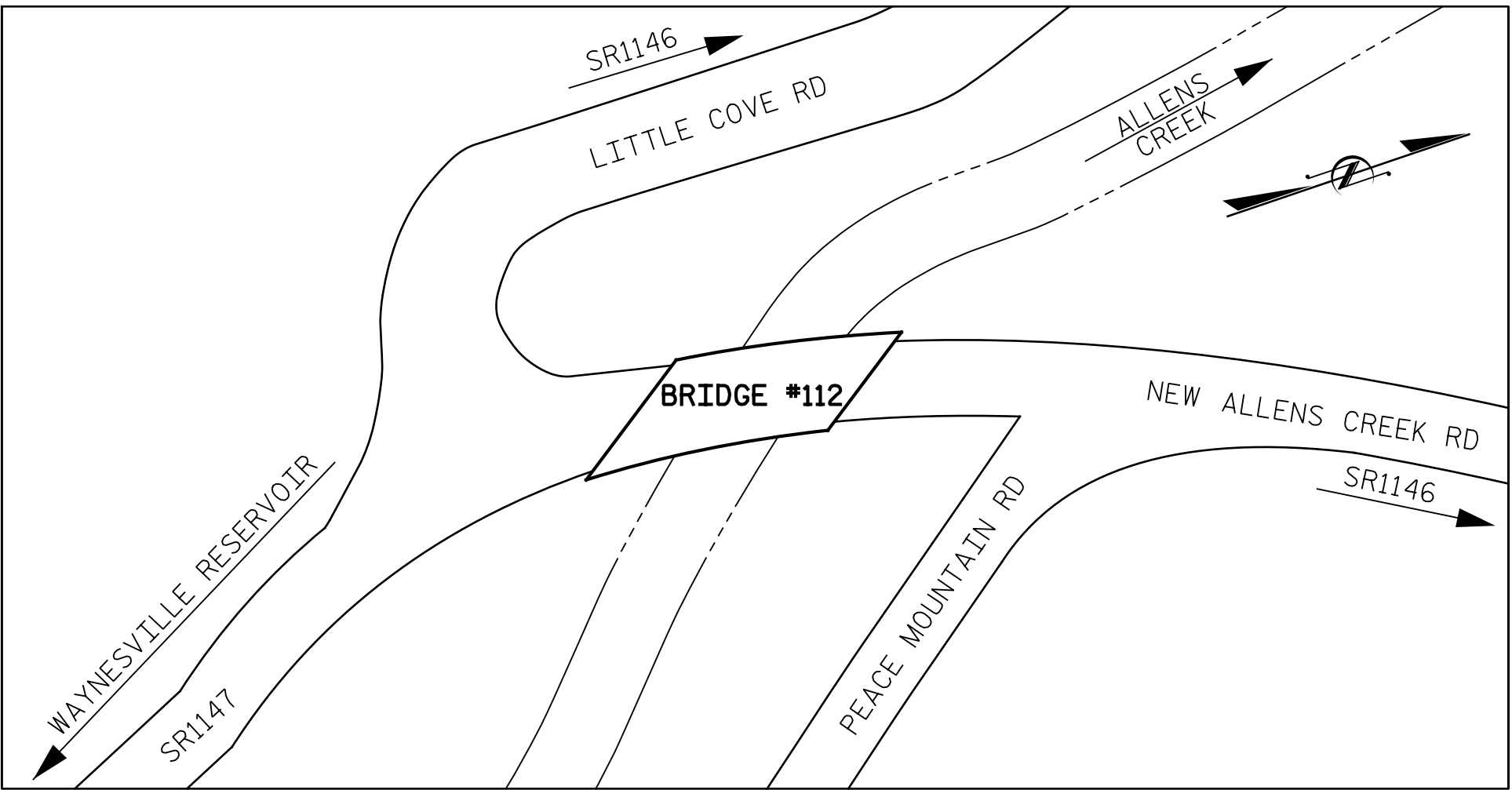
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-32	
1			3			TOTAL SHEETS	
2			4			142	



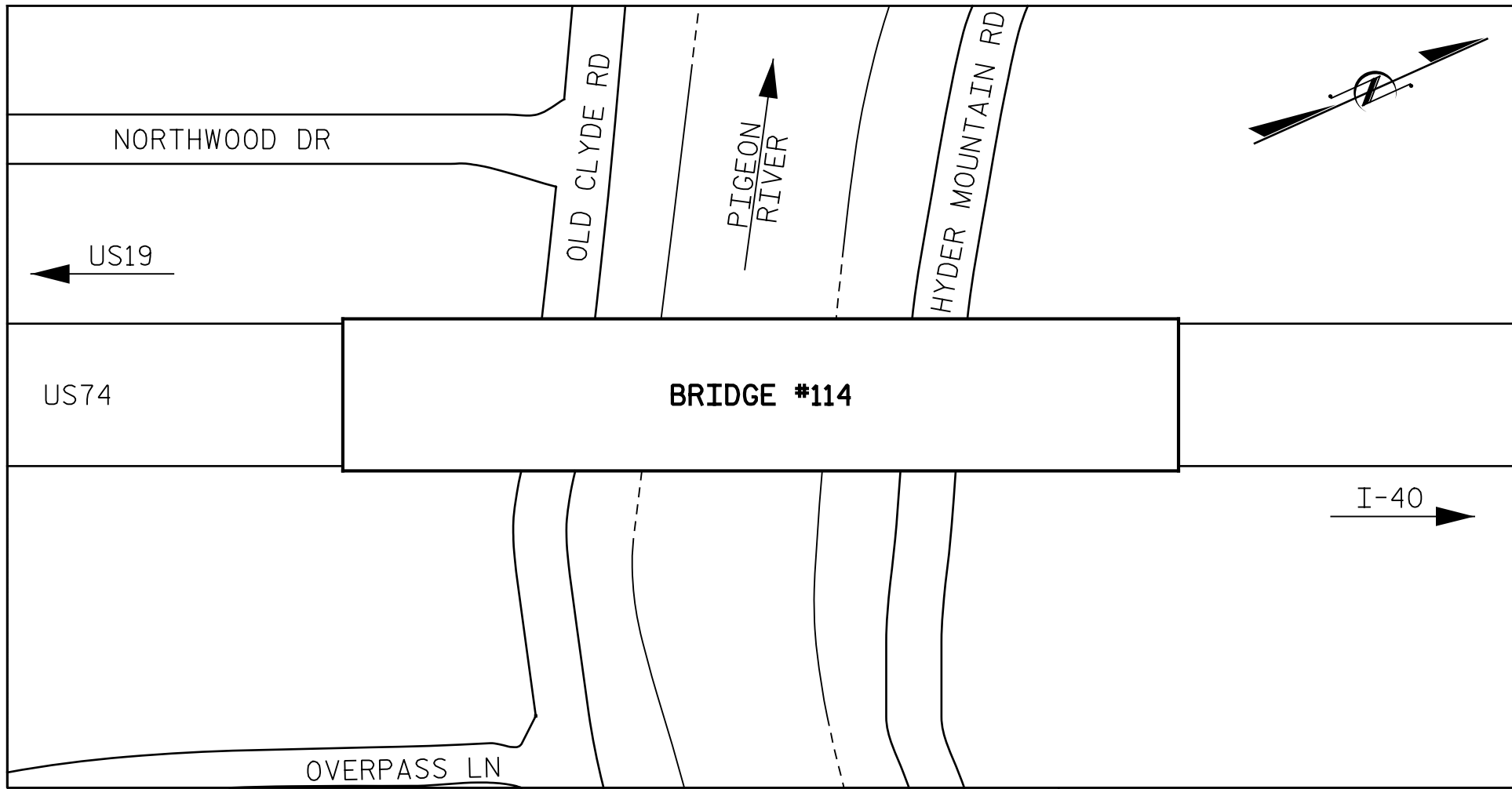
BRIDGE #109



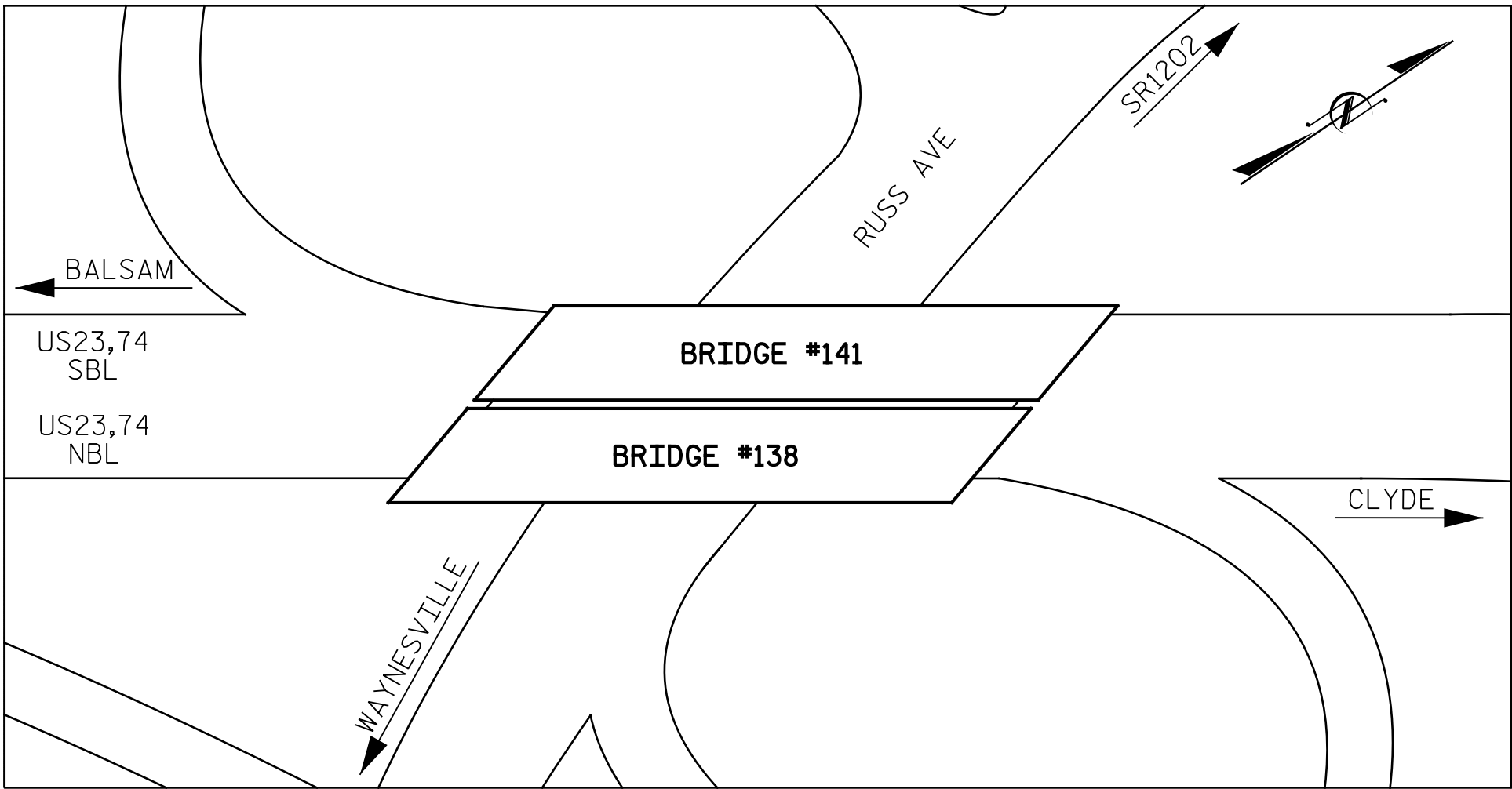
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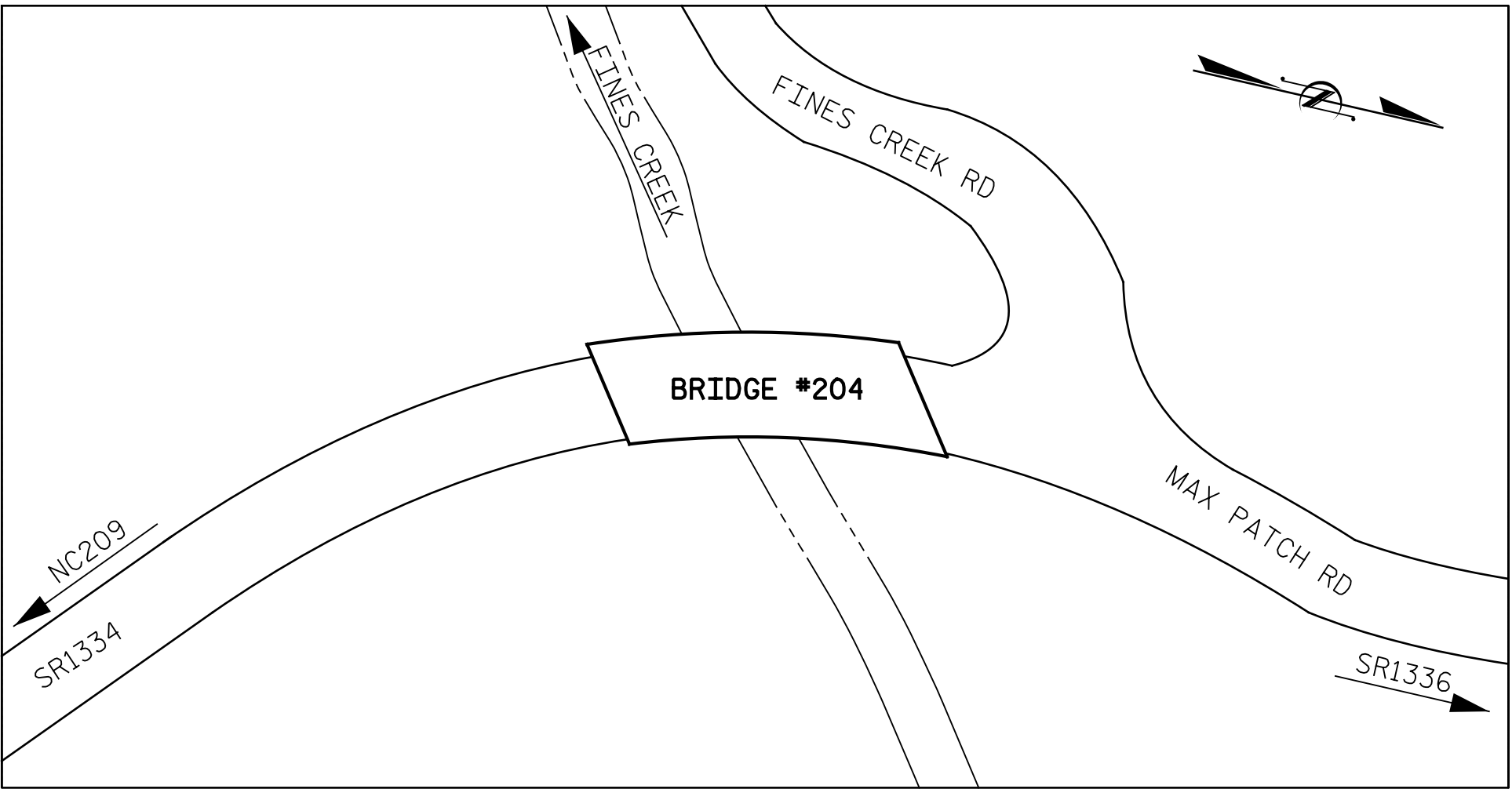
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BRIDGE #114



BRIDGE #138 AND #141

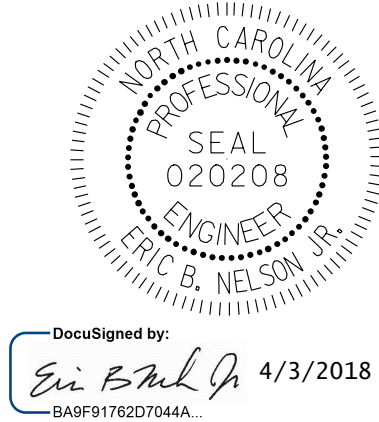


BRIDGE #204

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY

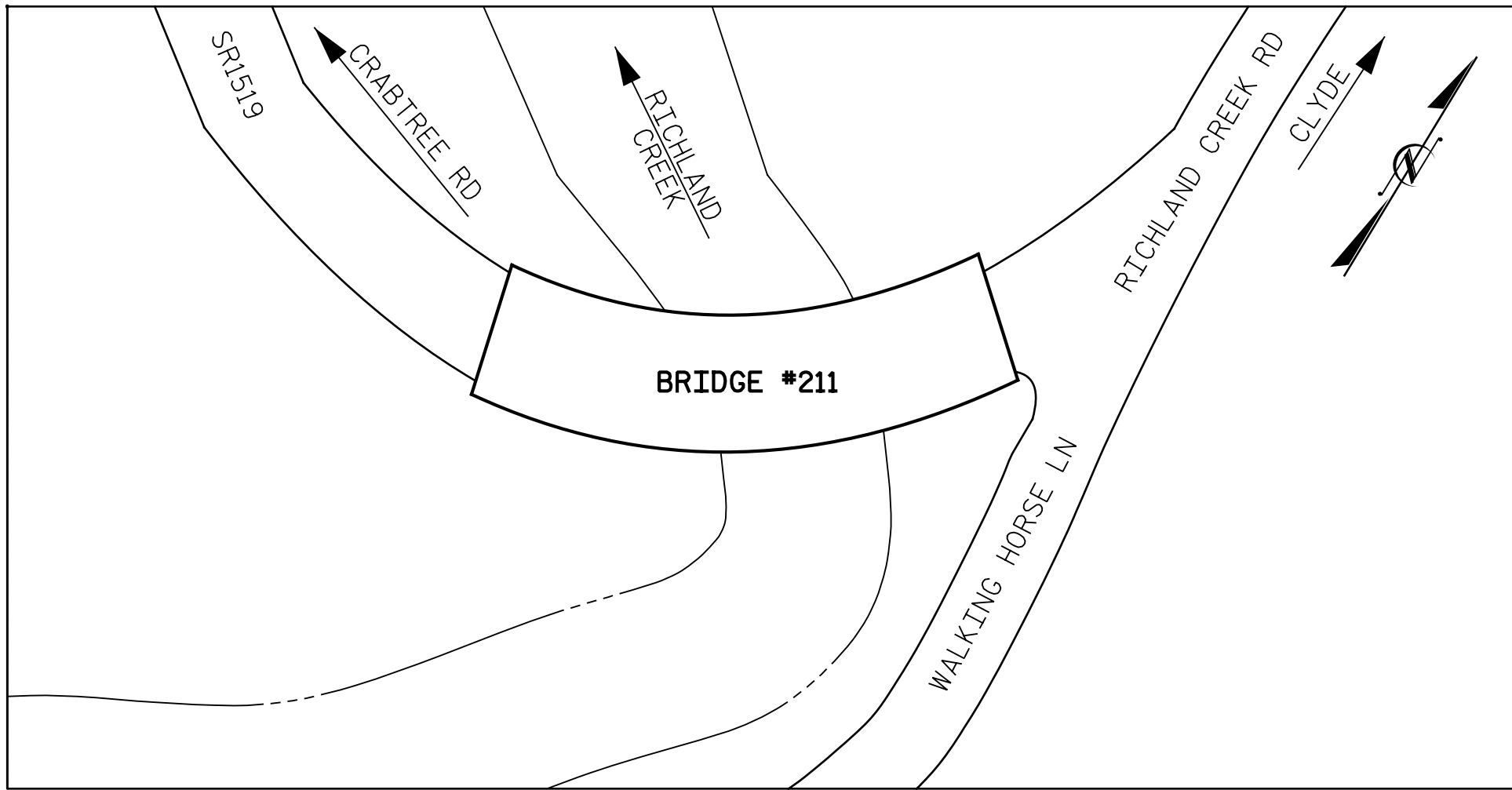


REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-33
1			3			TOTAL SHEETS 142
2			4			

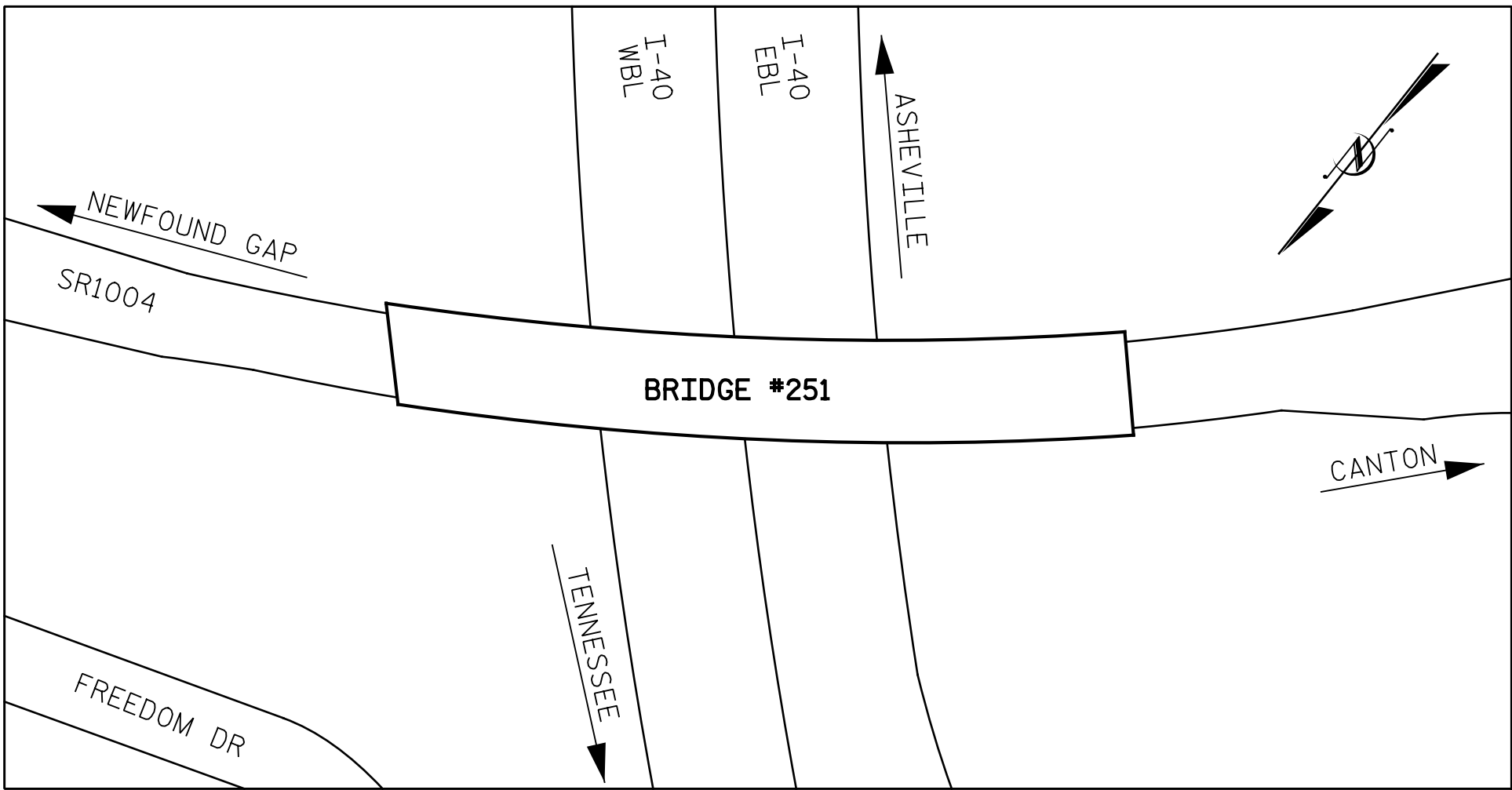
DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

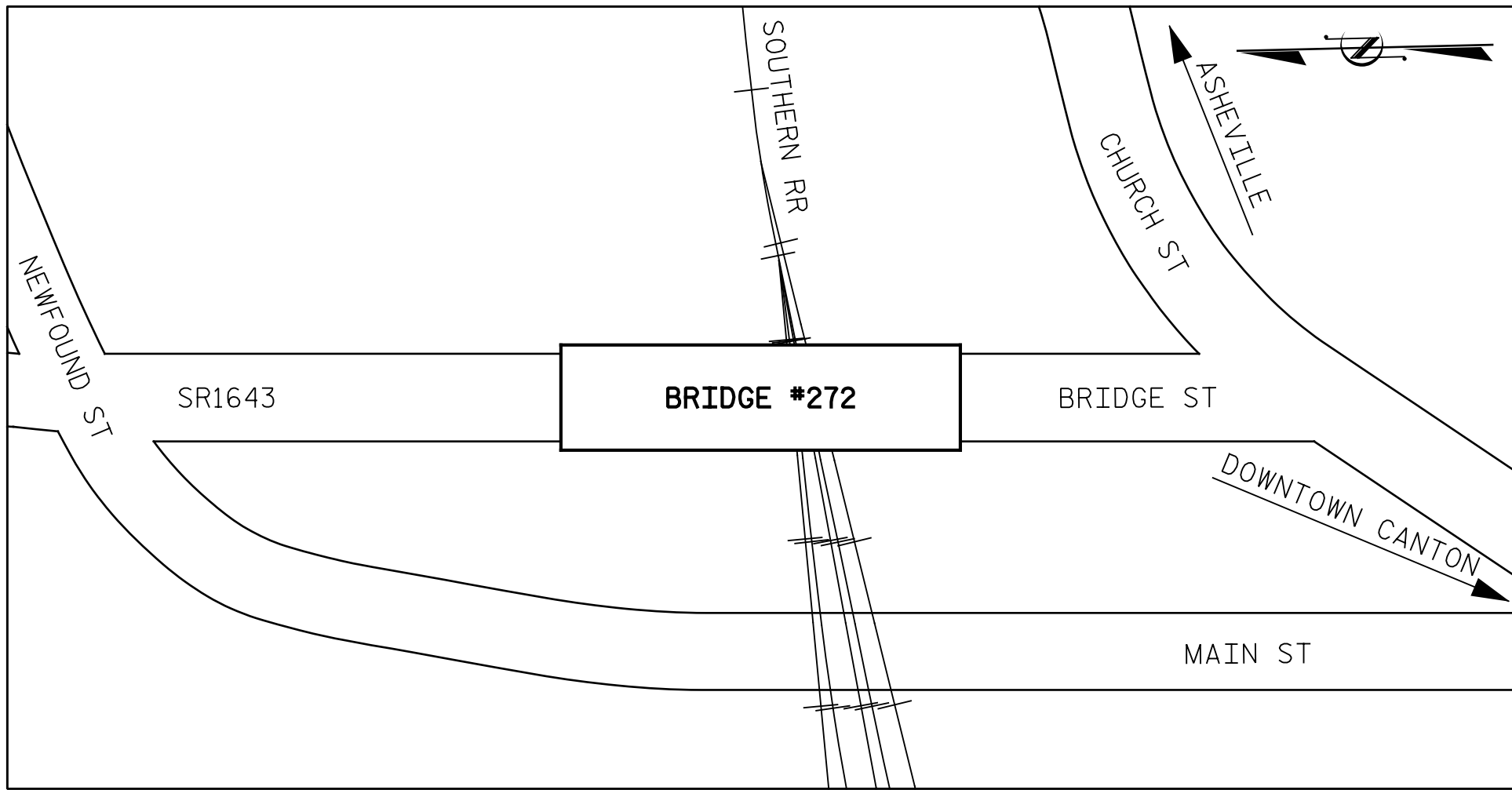
DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED



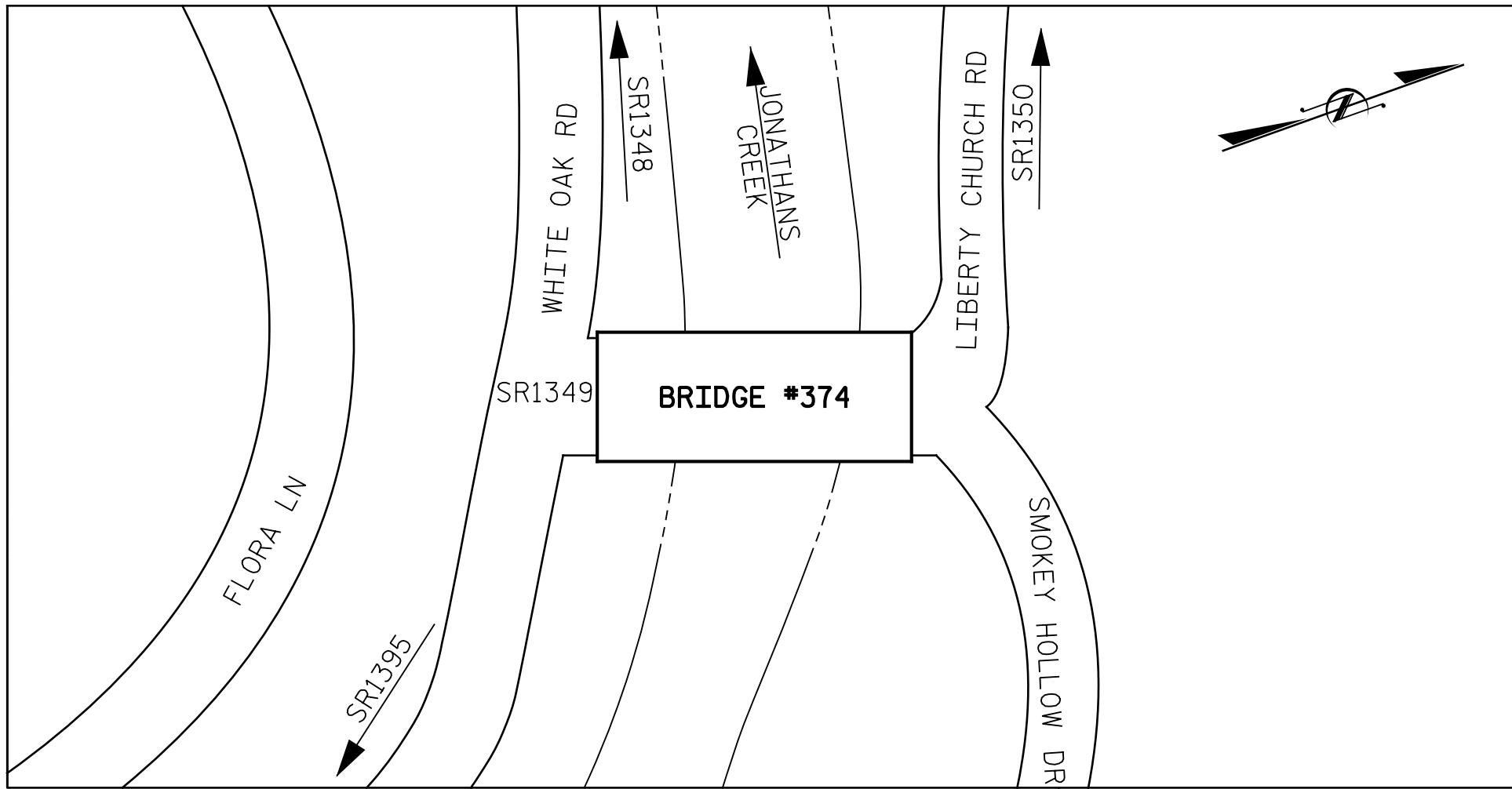
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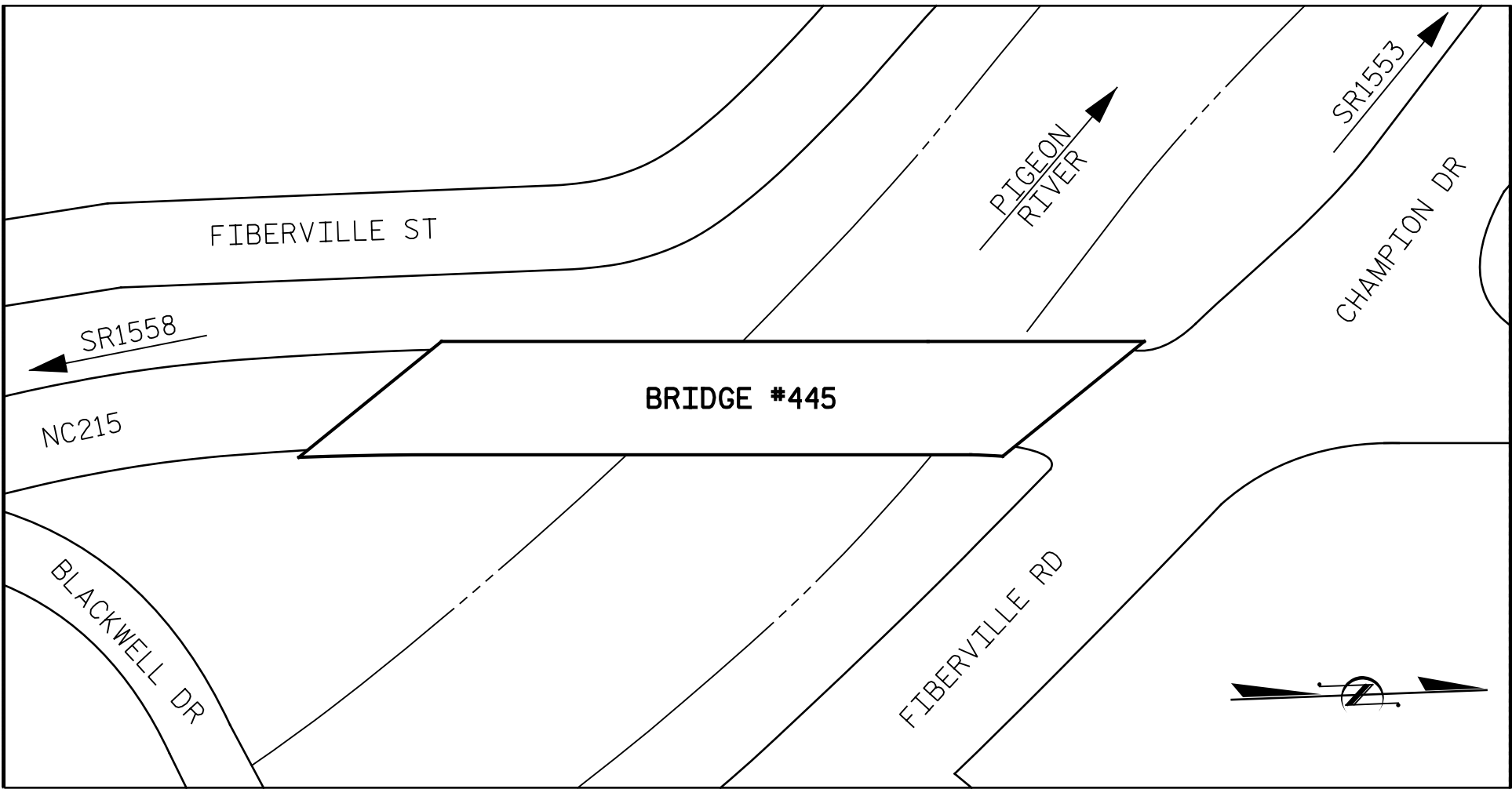
BRIDGE #251



BRIDGE #272



BRIDGE #374

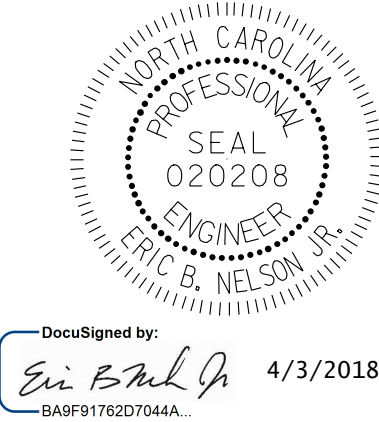


BRIDGE #445

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY

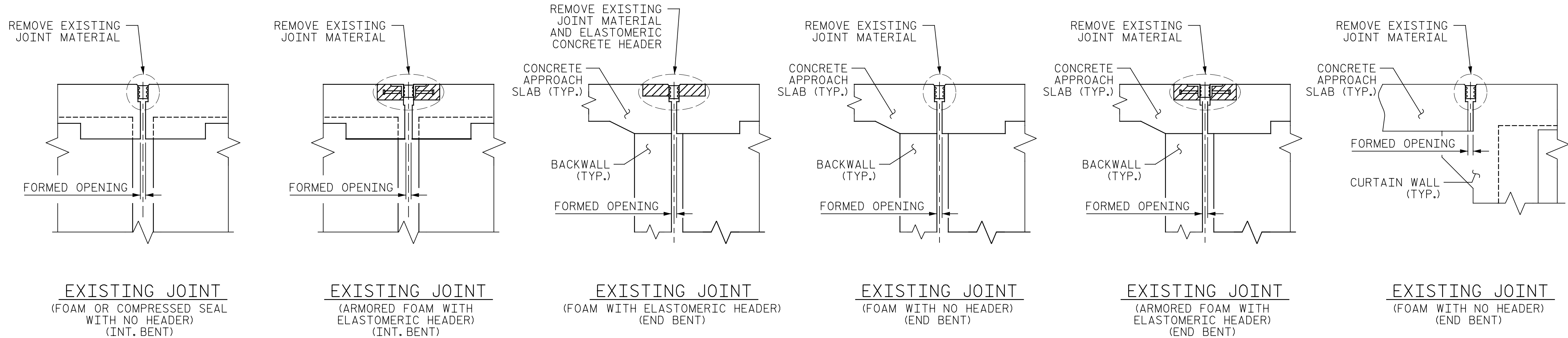


STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BRIDGE LOCATION SKETCHES					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-34					TOTAL SHEETS 142

DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
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NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



EXISTING JOINT TYPES

NOTES

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

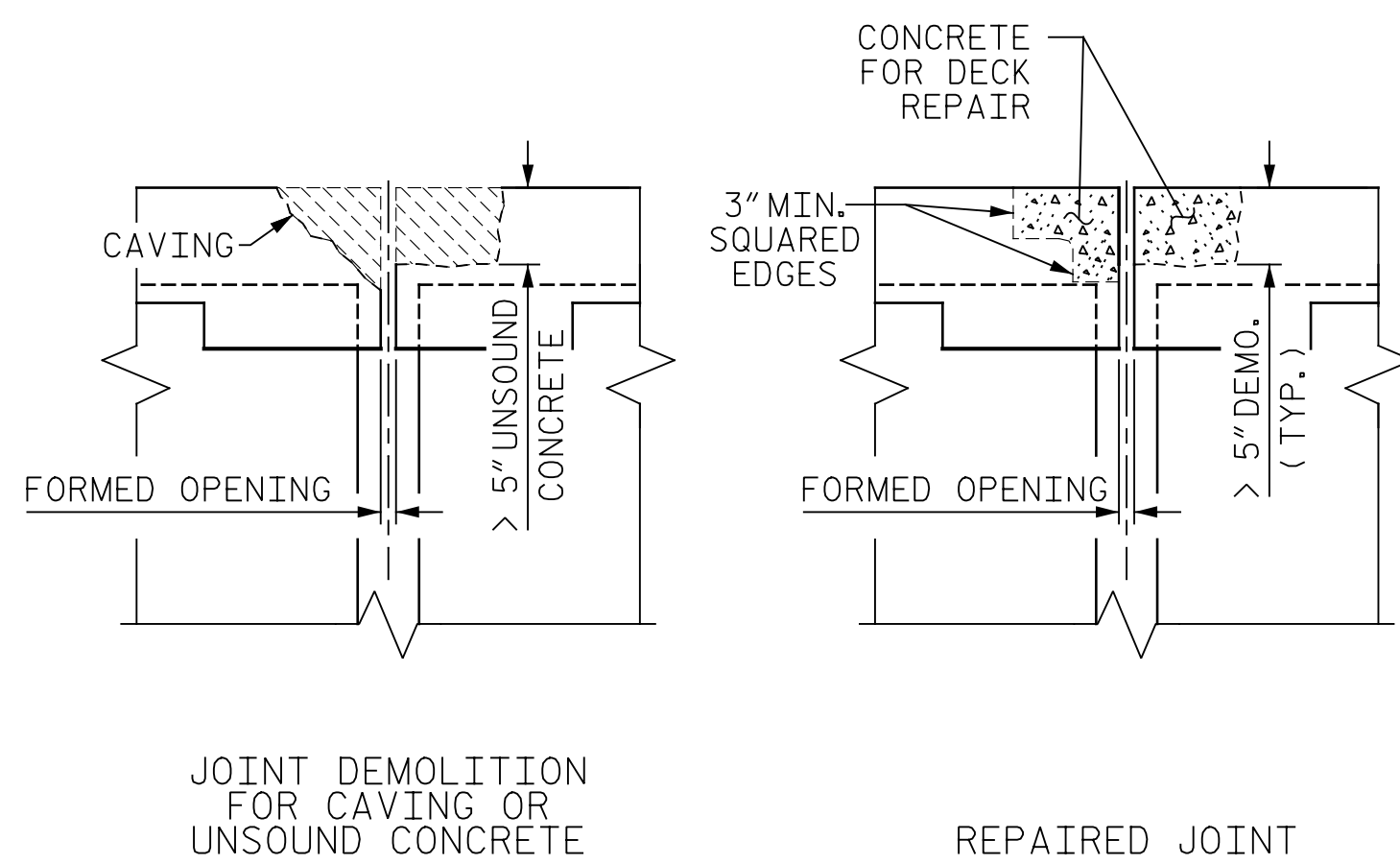
FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT OPENING FOR THE JOINT SEAL IN LIEU OF SAWING.



CONCRETE FOR DECK REPAIR DETAIL

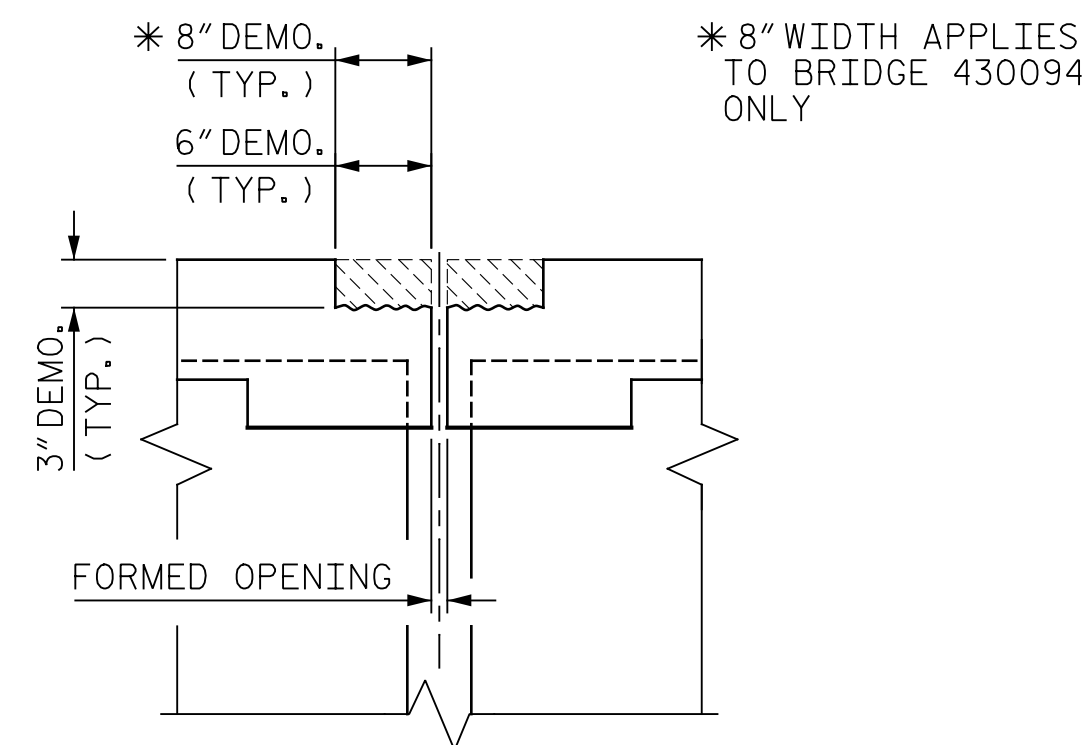
(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

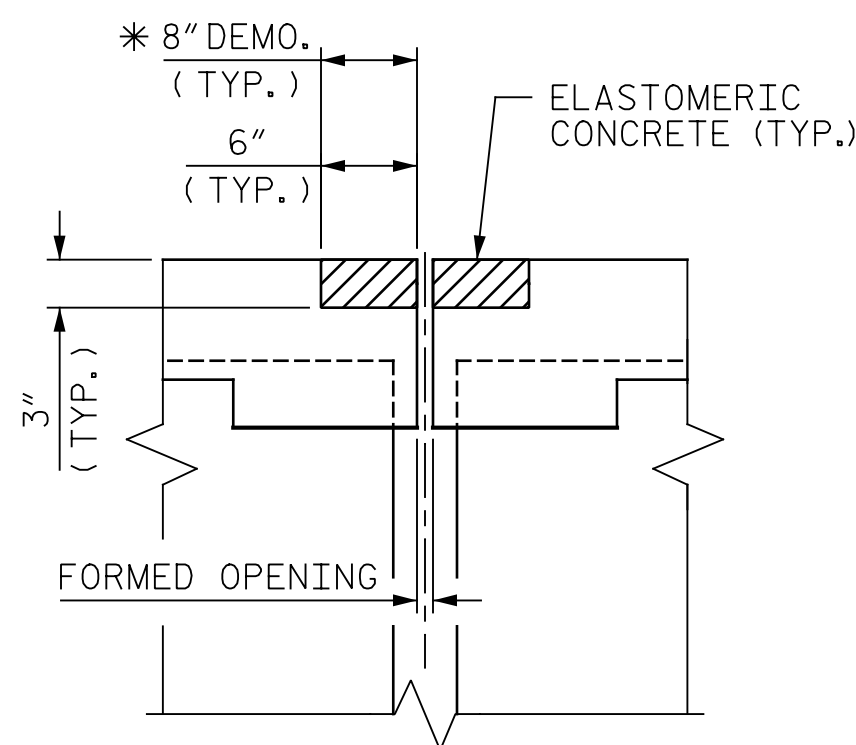
FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK.

DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

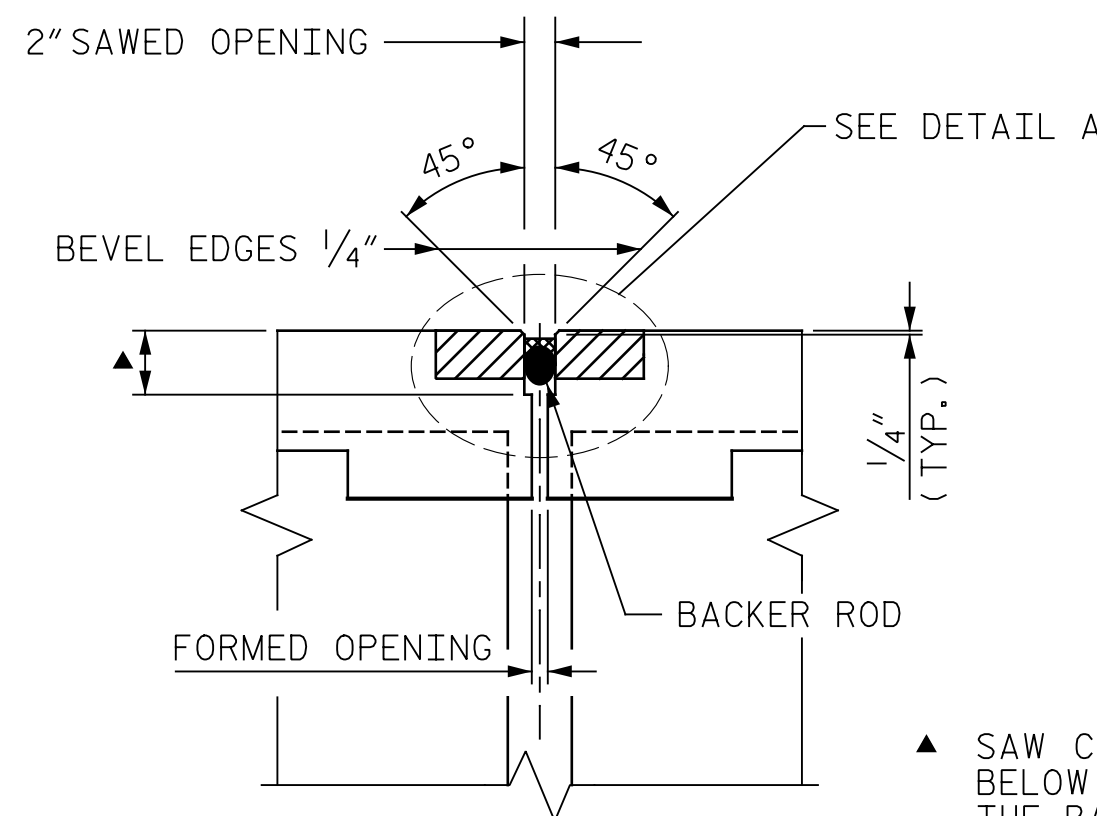
THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.



MINIMUM JOINT DEMOLITION

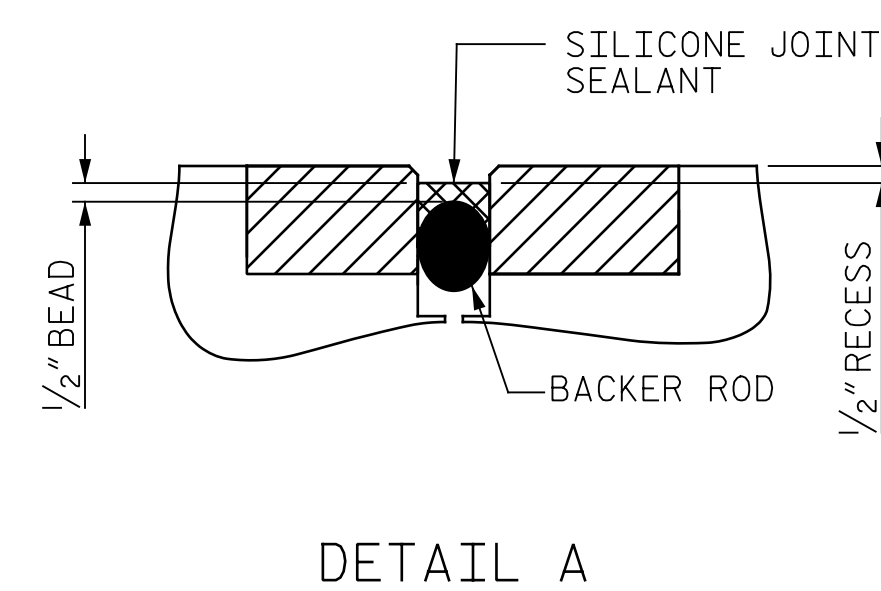


PROPOSED JOINT PRE-SAWED DIMENSIONS

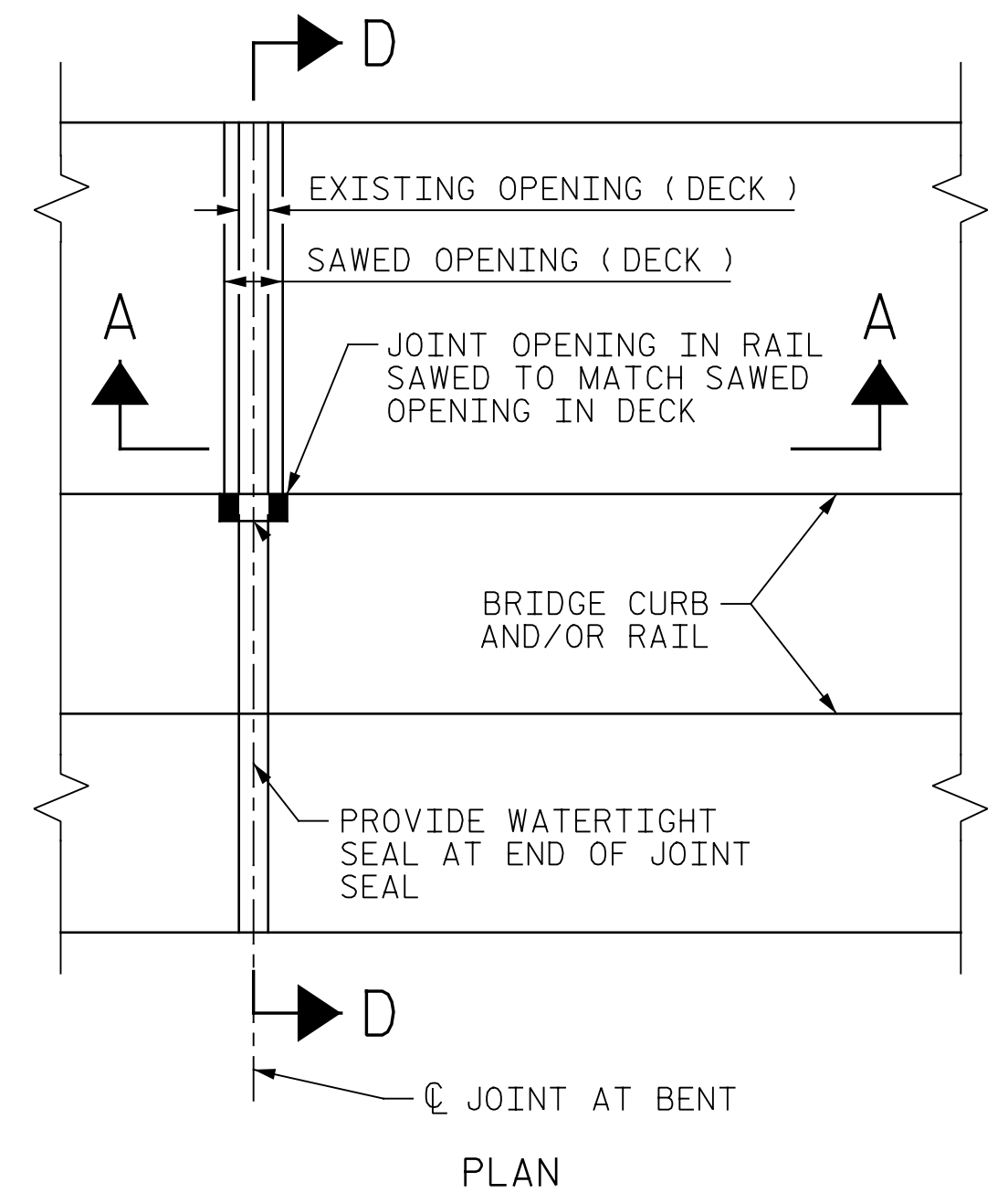


PROPOSED SILICONE JOINT SEAL

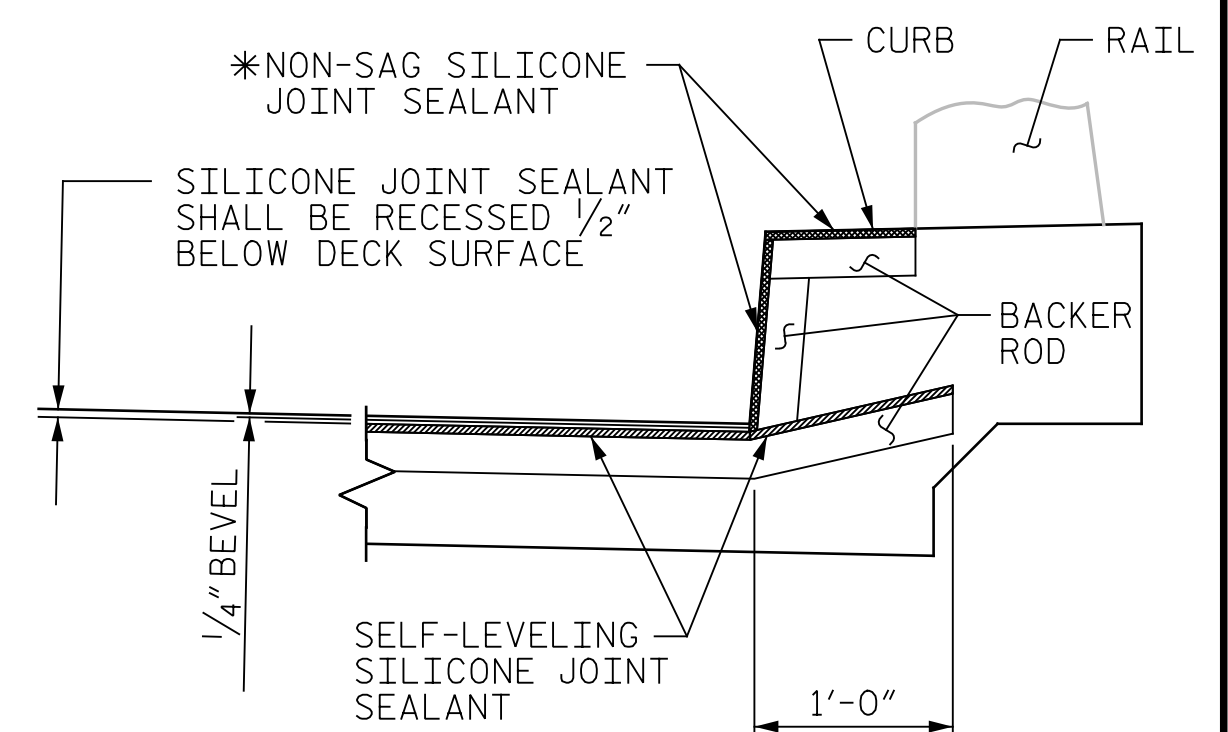
▲ SAW CUT SHALL BE $\frac{3}{4}$ " BELOW THE BOTTOM OF THE BACKER ROD. SEE MANUFACTURER RECOMMENDATIONS



DETAIL A



*SELF LEVELING SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.

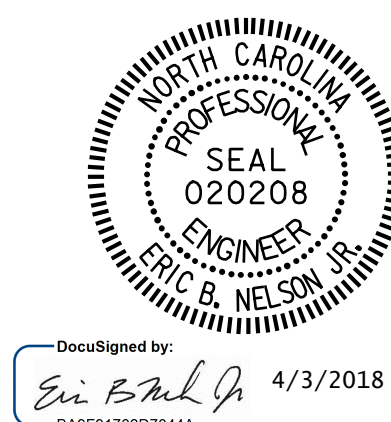


SECTION D-D

JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
BRIDGE NO. 23, 69, 94, 107, 109, 111, 138, 141, 204, 251, 272, 445

SHEET 1 OF 2



DocuSigned by:
Eric B. Nelson
4/3/2018

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

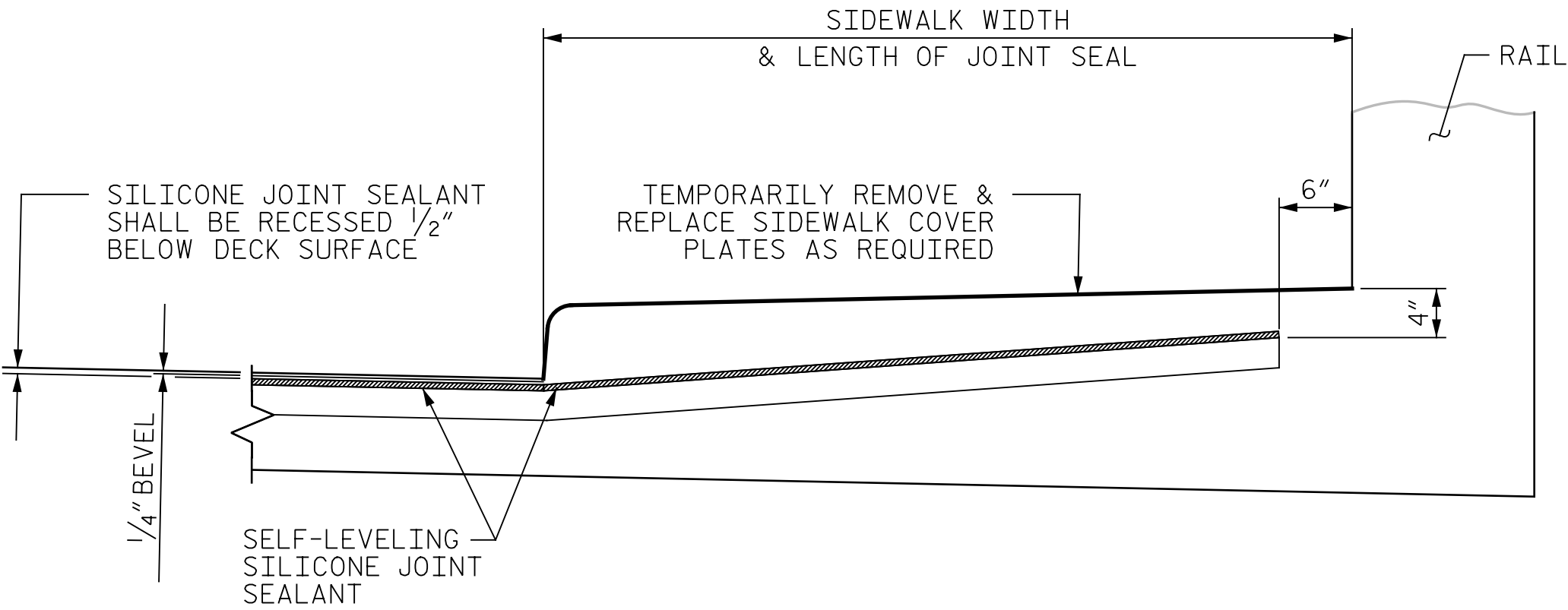
SECTION A-A PROPOSED JOINT

(INTERIOR BENT SHOWN, END BENTS ARE SIMILAR)

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
JOINT DETAIL FOR SILICONE JOINT SEAL WITH ELASTOMERIC HEADER					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-35					TOTAL SHEETS 142



JOINT SEAL DETAILS AT SIDEWALK

BRIDGE NO.	SILICONE JOINT SEAL (LF)					ELASTOMERIC CONCRETE (CF) / HEADER DIMENSIONS (WIDTH X DEPTH)										JOINT DEMOLITION (SF)					CONCRETE FOR DECK REPAIR (CF)				
	EB 1	BENT 1	BENT 2	BENT 3	EB 2	EB 1	DIM.	BENT 1	DIM.	BENT 2	DIM.	BENT 3	DIM.	EB 2	DIM.	EB 1	BENT 1	BENT 2	BENT 3	EB 2	EB 1	BENT 1	BENT 2	BENT 3	EB 2
430023	-	53.8	53.8	-	-	-	-	12.7	(2) 6"X3"	12.7	(2) 6"X3"	-	-	-	-	-	50.8	50.8	-	-	-	-	-	-	-
430069	51.5	-	-	-	51.5	12.1	(2) 6"X3"	-	-	-	-	-	-	12.1	(2) 6"X3"	48.5	-	-	-	48.5	-	-	-	-	-
430094	96.6	-	-	-	96.6	27.8	(2) 8"X3"	-	-	-	-	-	-	27.8	(2) 8"X3"	111.4	-	-	-	111.4	10.0	-	-	-	10.0
430107	49.3	-	-	-	49.3	11.6	(2) 6"X3"	-	-	-	-	-	-	11.6	(2) 6"X3"	46.3	-	-	-	46.3	-	-	-	-	-
430109	40.0	-	40.0	-	40.0	9.3	(2) 6"X3"	-	-	9.3	(2) 6"X3"	-	-	9.3	(2) 6"X3"	37.0	-	37.0	-	37.0	-	-	-	-	-
430111	46.5	-	-	-	46.5	10.9	(2) 6"X3"	-	-	-	-	-	-	10.9	(2) 6"X3"	43.5	-	-	-	43.5	-	-	-	-	-
430138	61.8	-	-	-	61.8	14.7	(2) 6"X3"	-	-	-	-	-	-	14.7	(2) 6"X3"	58.8	-	-	-	58.8	-	-	-	-	-
430141	61.8	-	-	-	61.8	14.7	(2) 6"X3"	-	-	-	-	-	-	14.7	(2) 6"X3"	58.8	-	-	-	58.8	-	-	-	-	-
430204	40.0	-	-	-	40.0	9.3	(2) 6"X3"	-	-	-	-	-	-	9.3	(2) 6"X3"	37.0	-	-	-	37.0	-	-	-	-	-
430251	39.7	39.7	39.7	39.7	39.7	9.2	(2) 6"X3"	9.2	(2) 6"X3"	9.2	(2) 6"X3"	9.2	(2) 6"X3"	9.2	(2) 6"X3"	36.7	36.7	36.7	36.7	36.7	-	-	-	-	-
430272	38.0	-	-	-	-	7.0	(2) 6"X3"	-	-	-	-	-	-	-	-	28.0	-	-	-	-	-	-	-	-	-
430445	49.5	-	-	-	49.5	9.9	(2) 6"X3"	-	-	-	-	-	-	9.9	(2) 6"X3"	39.6	-	-	-	39.6	-	-	-	-	-

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
BRIDGE NO. 23, 69, 94, 107, 109, 111, 138, 141, 204, 251, 272, 445

SHEET 2 OF 2



DocuSigned by:
Eric B. Nelson 4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT TABLE FOR
SILICONE JOINT SEAL
WITH ELASTOMERIC
HEADER

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-36	
1			3			TOTAL SHEETS 142	
2			4				

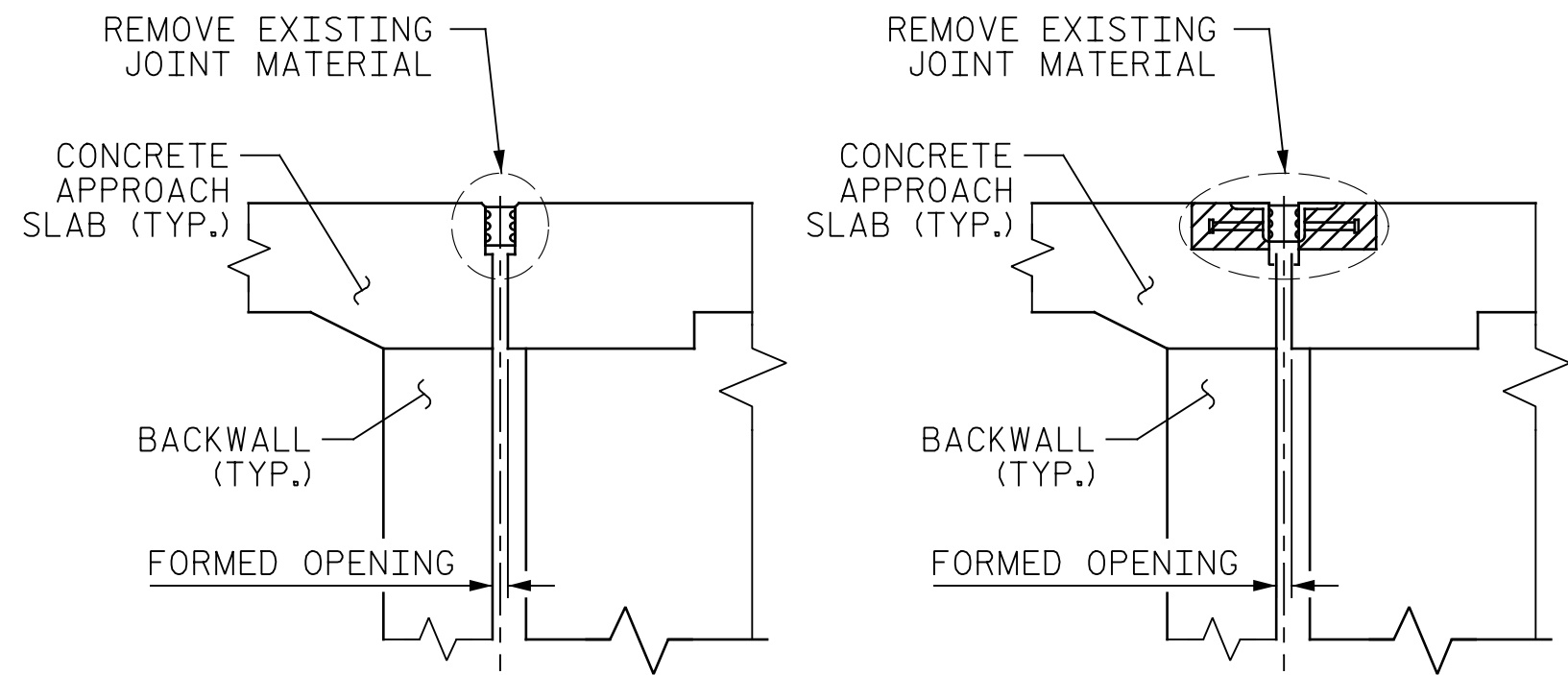
DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:

Gannett Fleming
Excellence Delivered *As Promised*

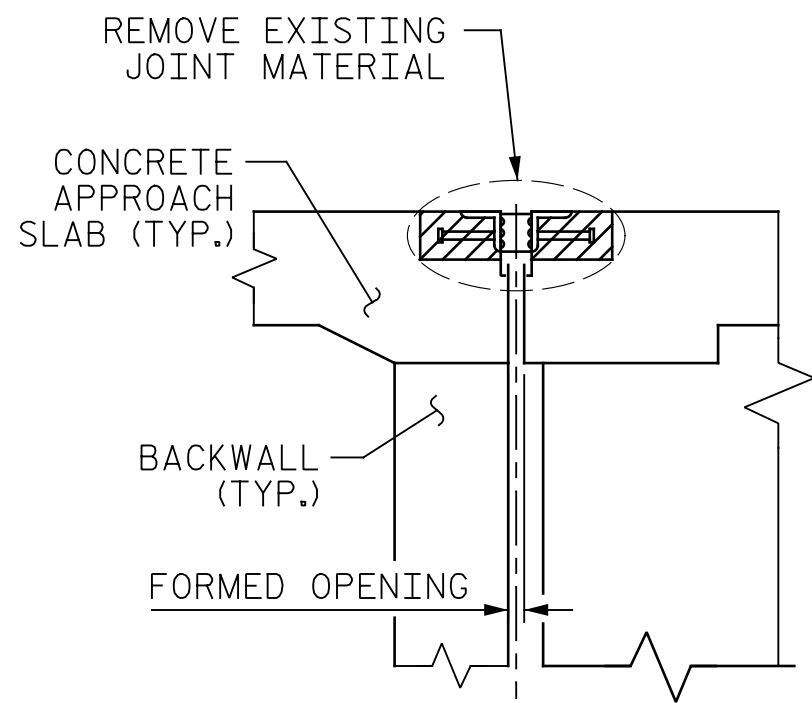
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
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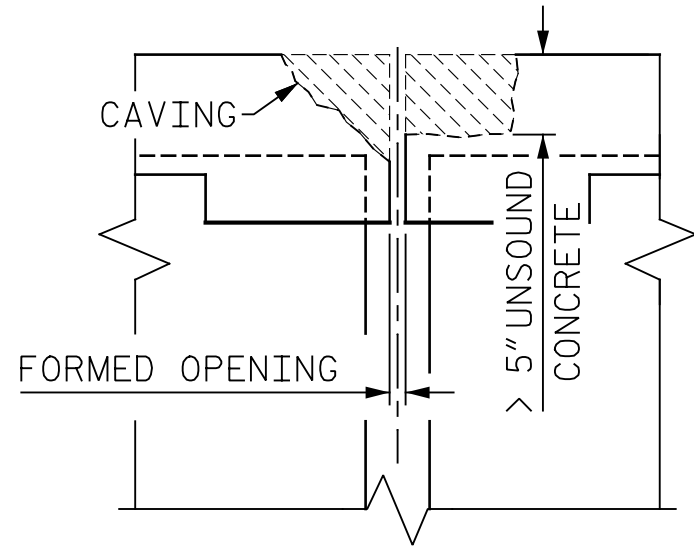


EXISTING JOINT
(FOAM WITH NO HEADER)
(END BENT)

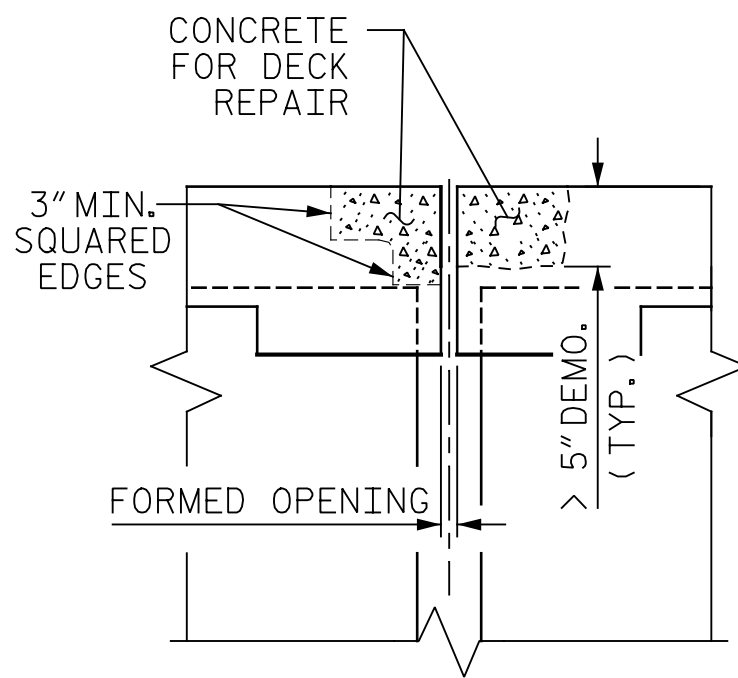
EXISTING JOINT TYPES



EXISTING JOINT
(ARMORED FOAM WITH
ELASTOMERIC HEADER)
(END BENT)



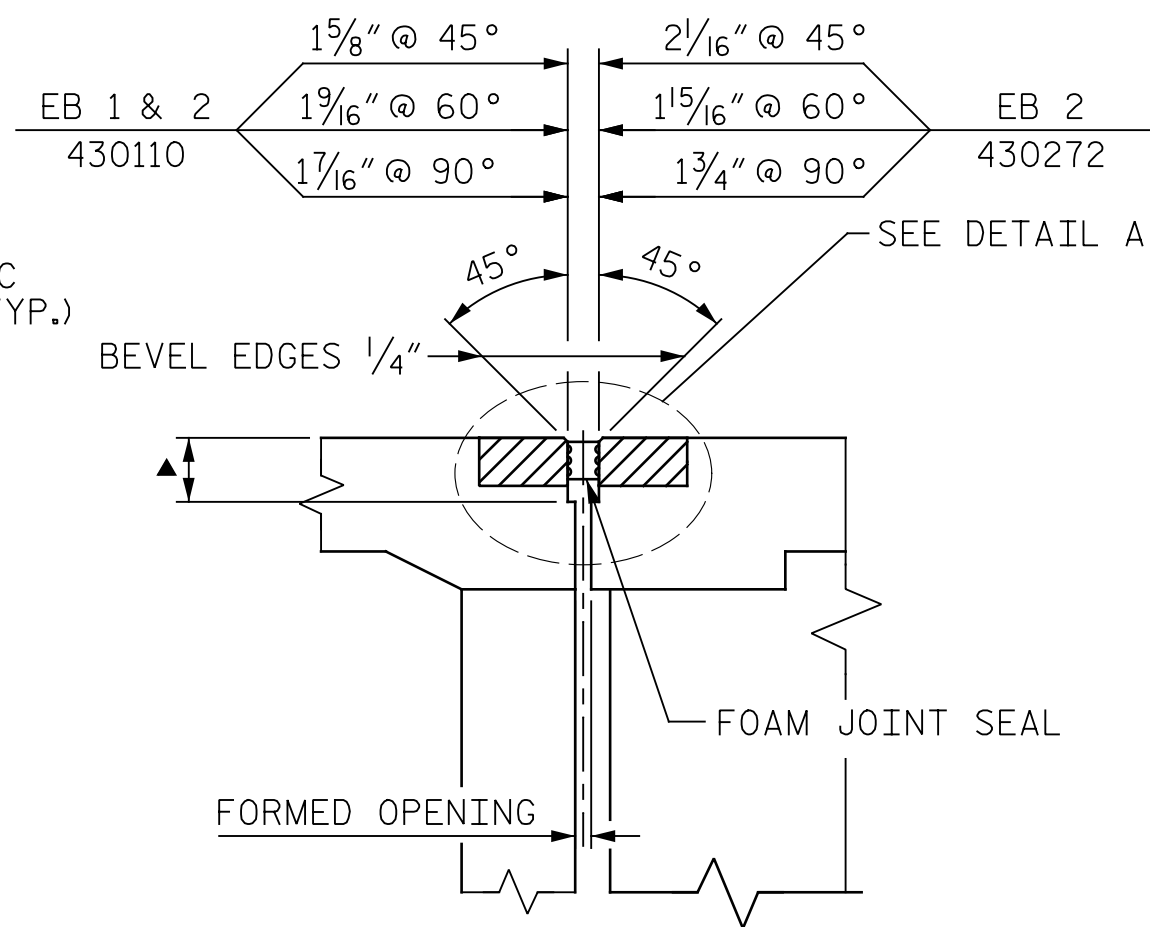
JOINT DEMOLITION
FOR CAVING OR
UN SOUND CONCRETE



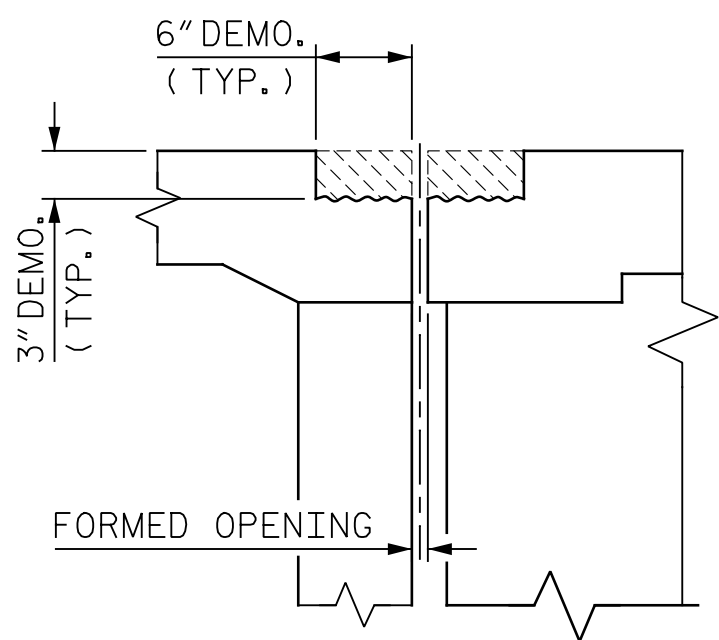
REPAIRED JOINT

CONCRETE FOR DECK REPAIR DETAIL

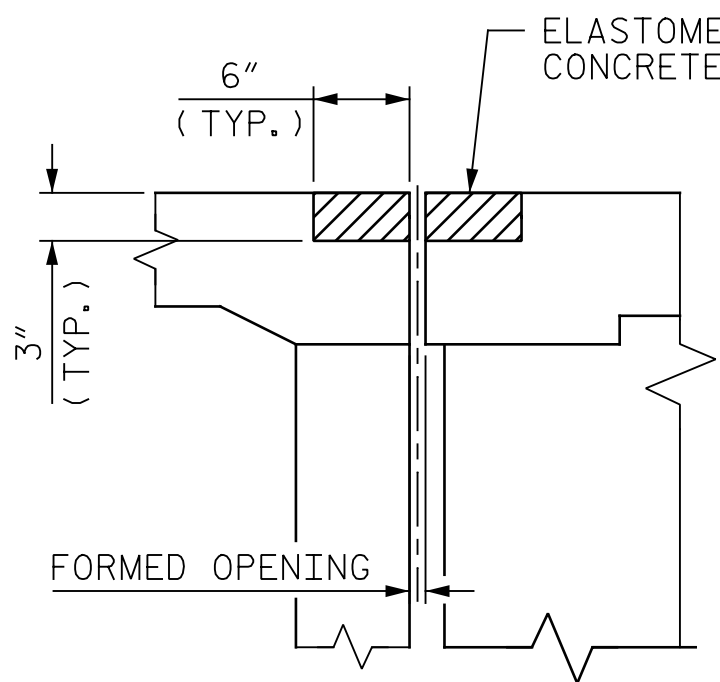
(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)



PROPOSED SILICONE
JOINT SEAL

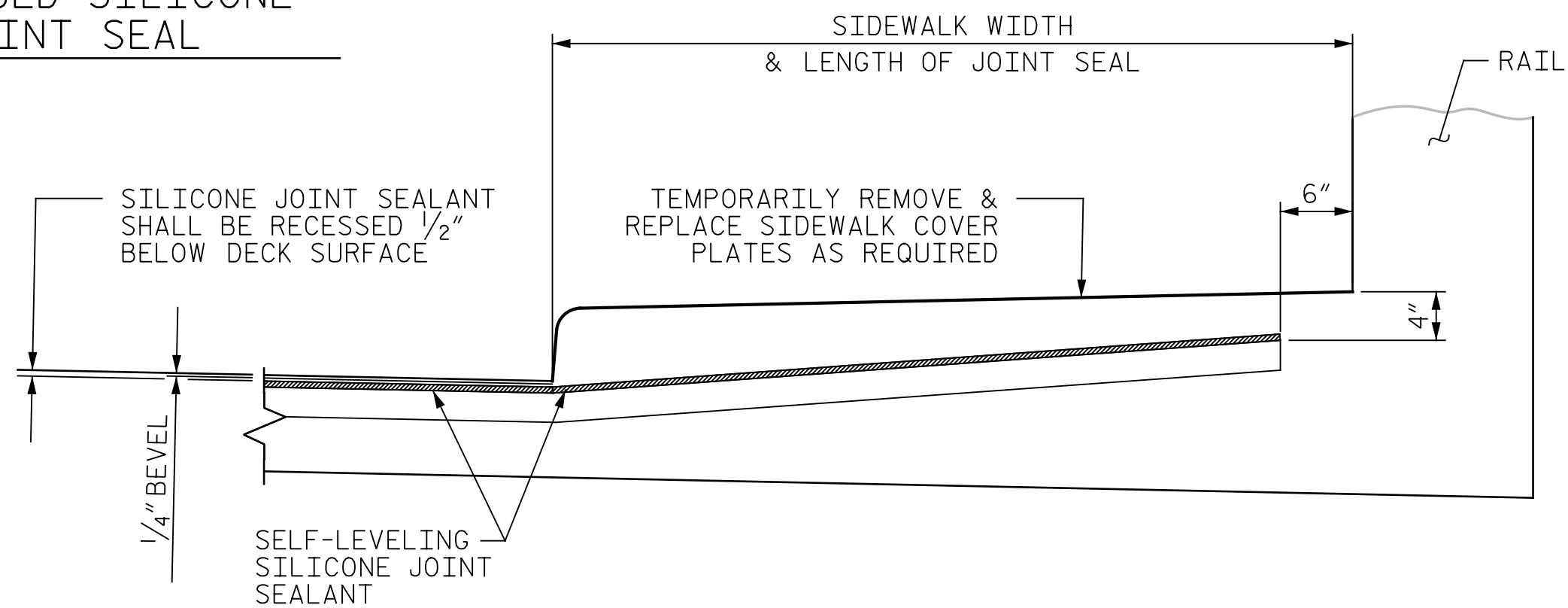


MINIMUM
JOINT DEMOLITION



PROPOSED JOINT
PRE-SAWED DIMENSIONS

SECTION A-A
PROPOSED JOINT



JOINT SEAL DETAILS AT SIDEWALK

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.

NOTES

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

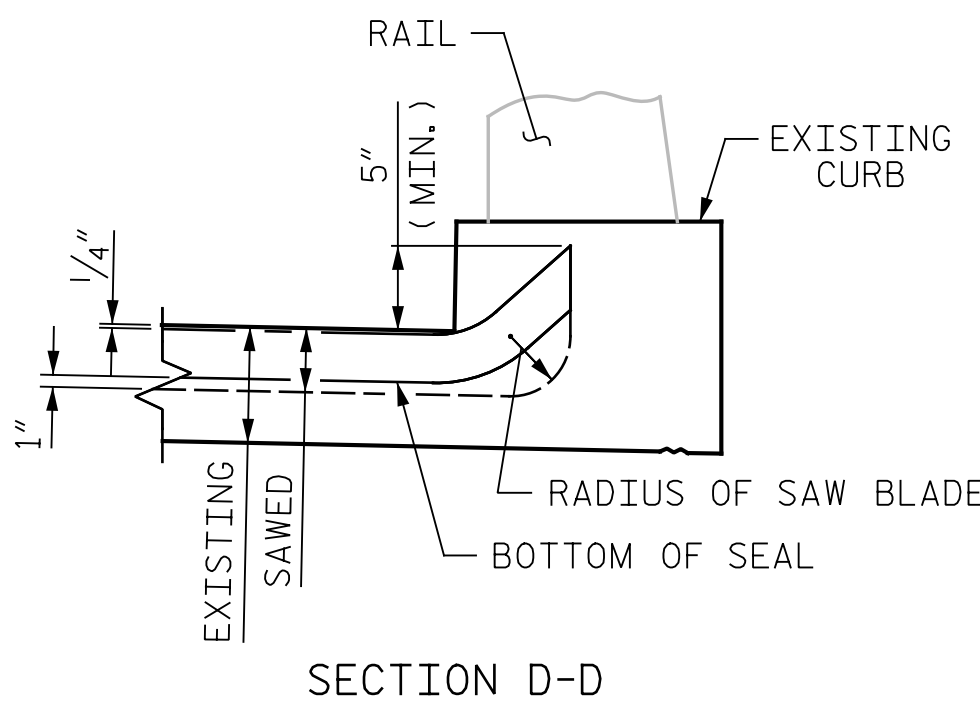
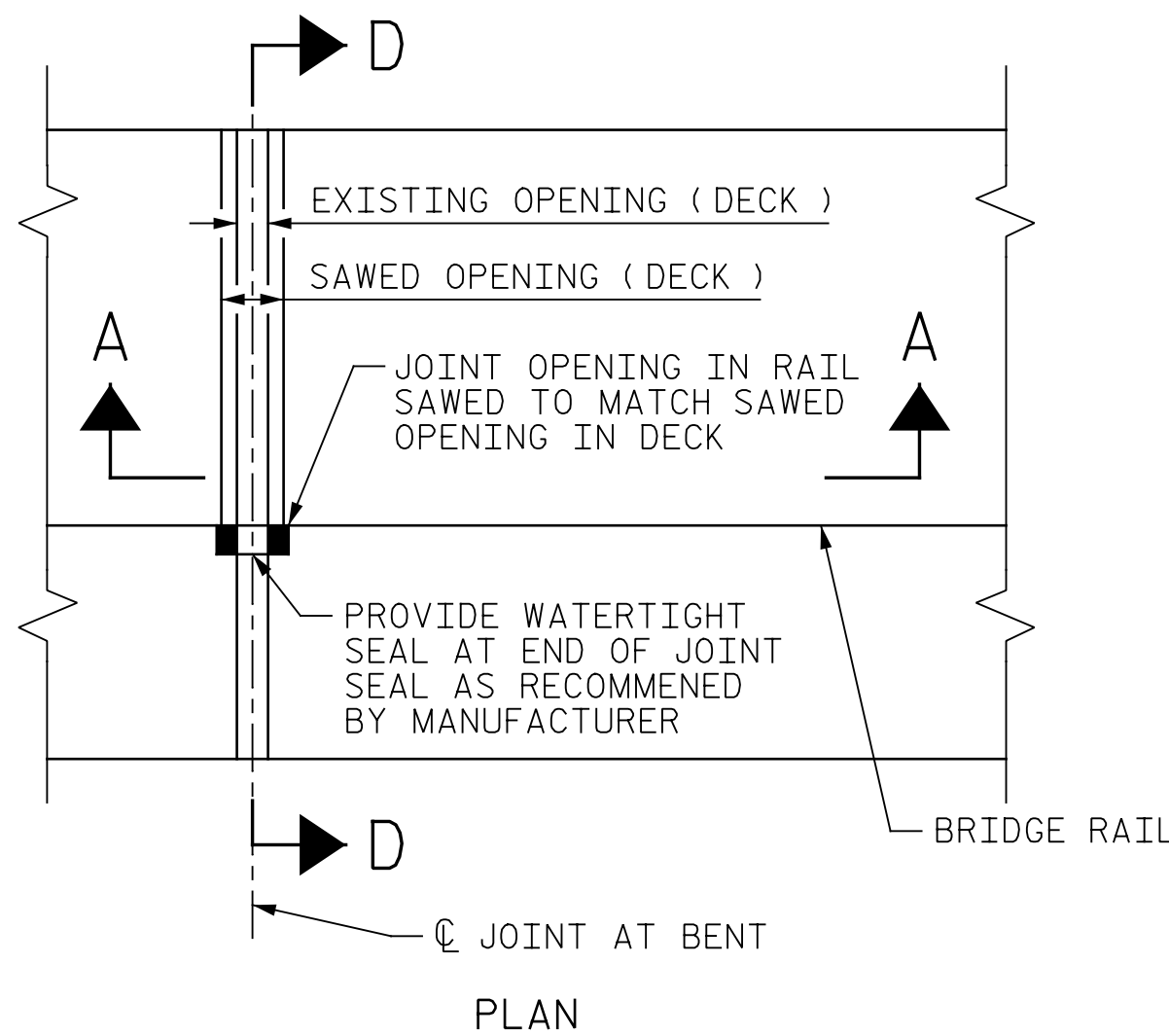
FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT OPENING FOR THE JOINT SEAL IN LIEU OF SAWING.

THE NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE:
BRIDGE 430110 END BENT 1 AND END BENT 2 IS 2".
BRIDGE 430272 END BENT 2 IS 2 1/2".



JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
BRIDGE NO. 110, 272

	FOAM JOINT SEAL (LF)					ELASTOMERIC CONCRETE (CF) / HEADER DIMENSIONS (WIDTH X DEPTH)										JOINT DEMOLITION (SF)					CONCRETE FOR DECK REPAIR (CF)				
BRIDGE NO.	EB 1	BENT 1	BENT 2	BENT 3	EB 2	EB 1	DIM.	BENT 1	DIM.	BENT 2	DIM.	BENT 3	DIM.	EB 2	DIM.	EB 1	BENT 1	BENT 2	BENT 3	EB 2	EB 1	BENT 1	BENT 2	BENT 3	EB 2
430110	48.4	-	-	-	48.4	11.6	(2) 6"x3"	-	-	-	-	-	-	11.6	(2) 6"x3"	46.4	-	-	-	46.4	-	-	-	-	-
430272	-	-	-	-	38.0	-	-	-	-	-	-	-	-	7.0	(2) 6"x3"	-	-	-	-	28.0	-	-	-	-	-

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
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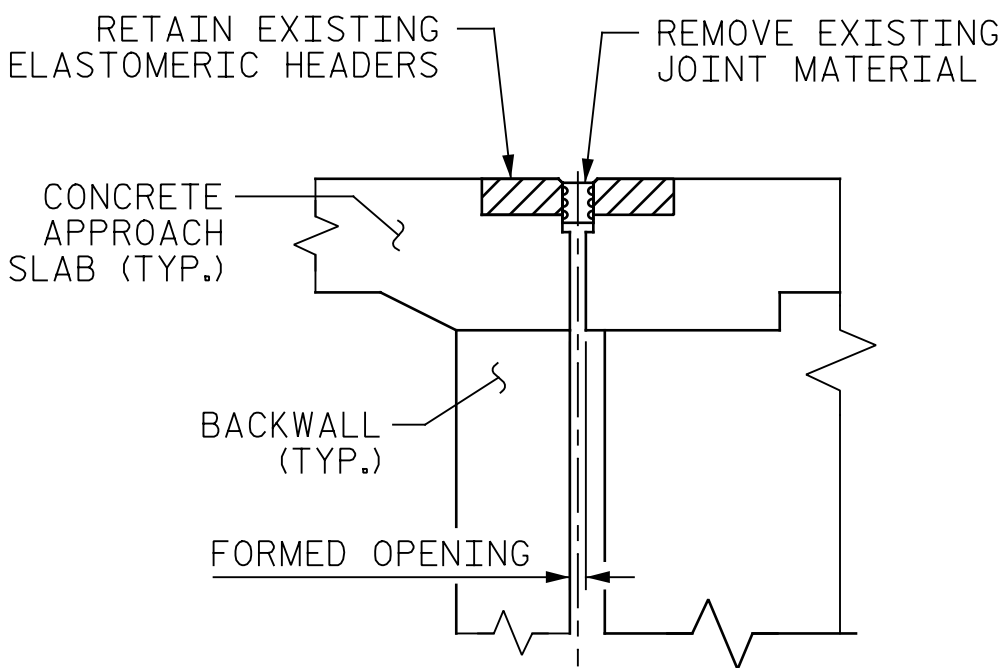
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



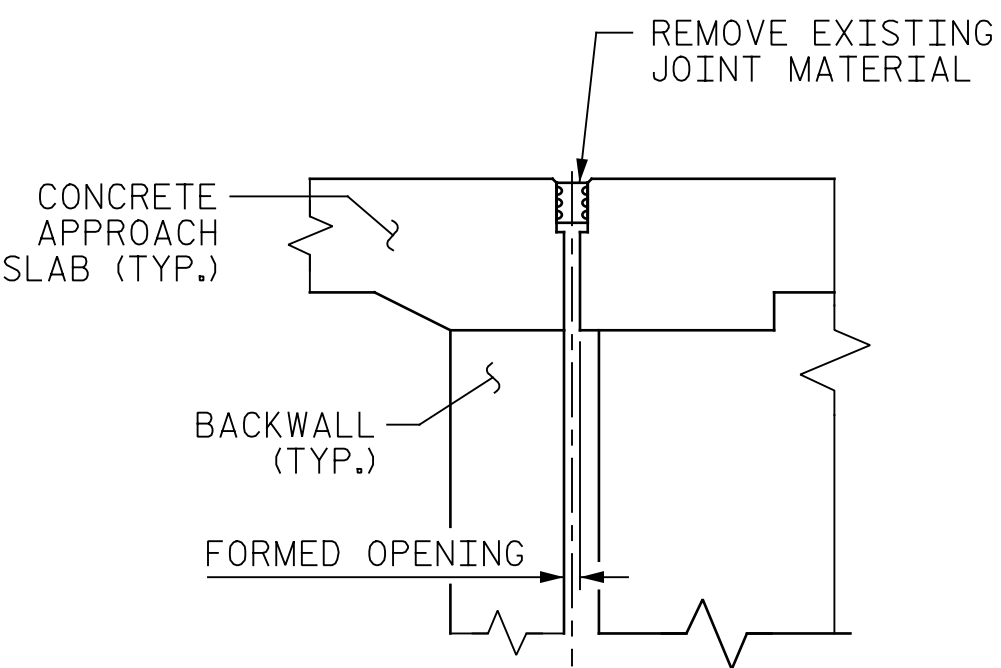
DocuSigned by:
Eric B. Nelson
4/3/2018

REVISIONS					SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-37
2			4			
TOTAL SHEETS						142

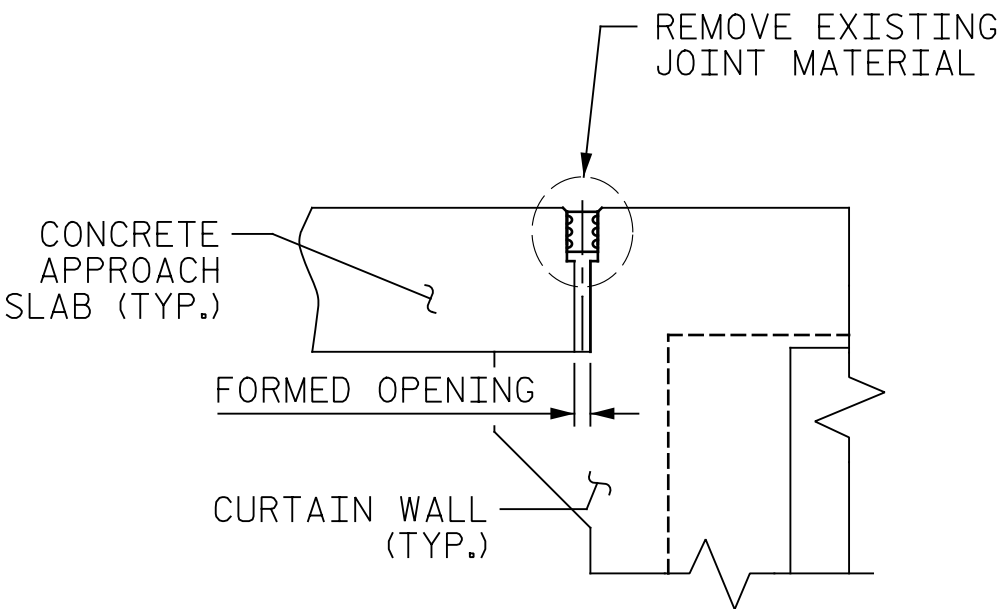
NOTES
FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.



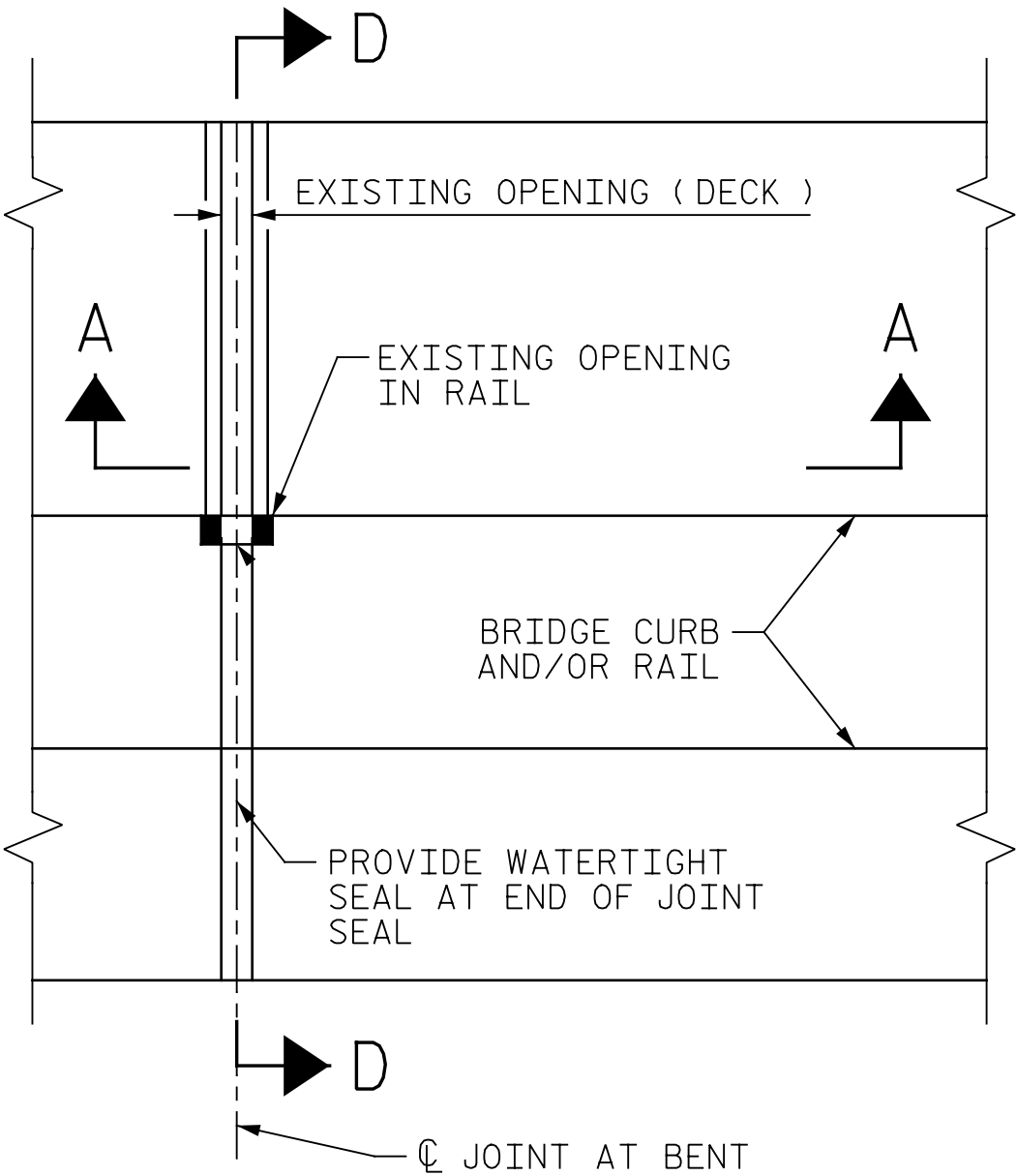
EXISTING JOINT
(FOAM WITH ELASTOMERIC HEADER)
(430036, 430112, 430211)



EXISTING JOINT
(FOAM WITH NO HEADER)
(430374)



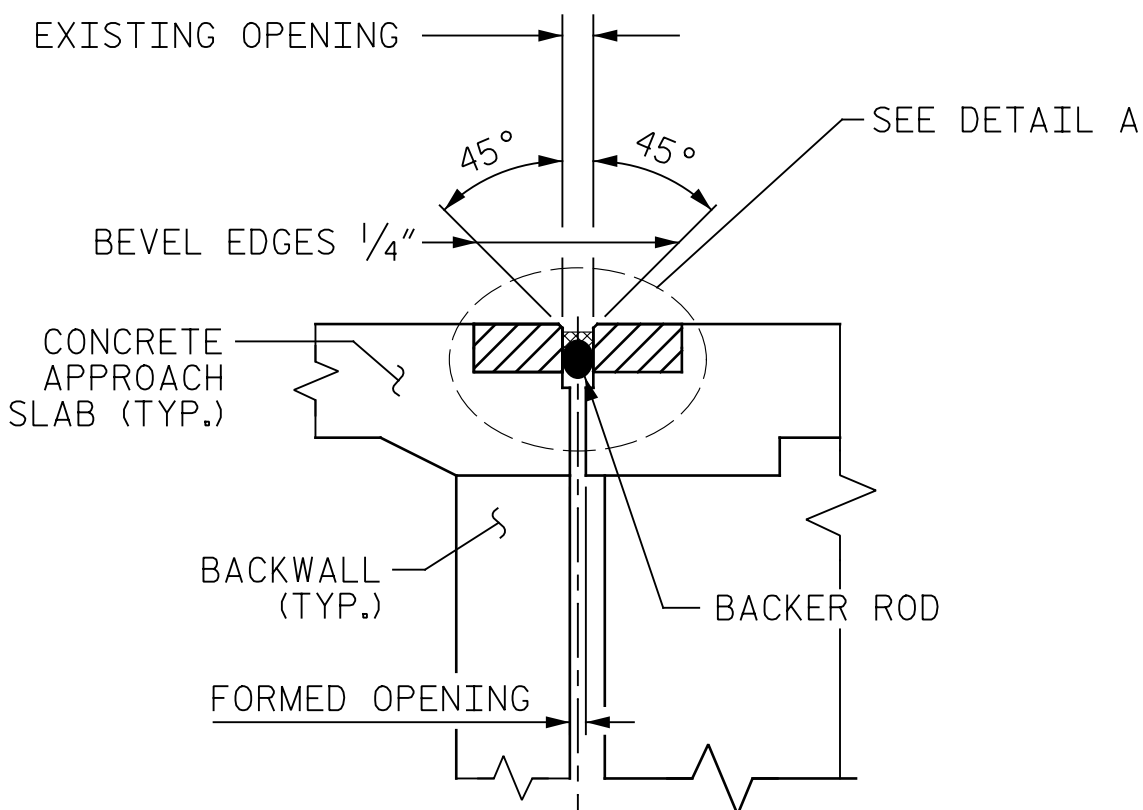
EXISTING JOINT
(FOAM WITH NO HEADER)
(430023)



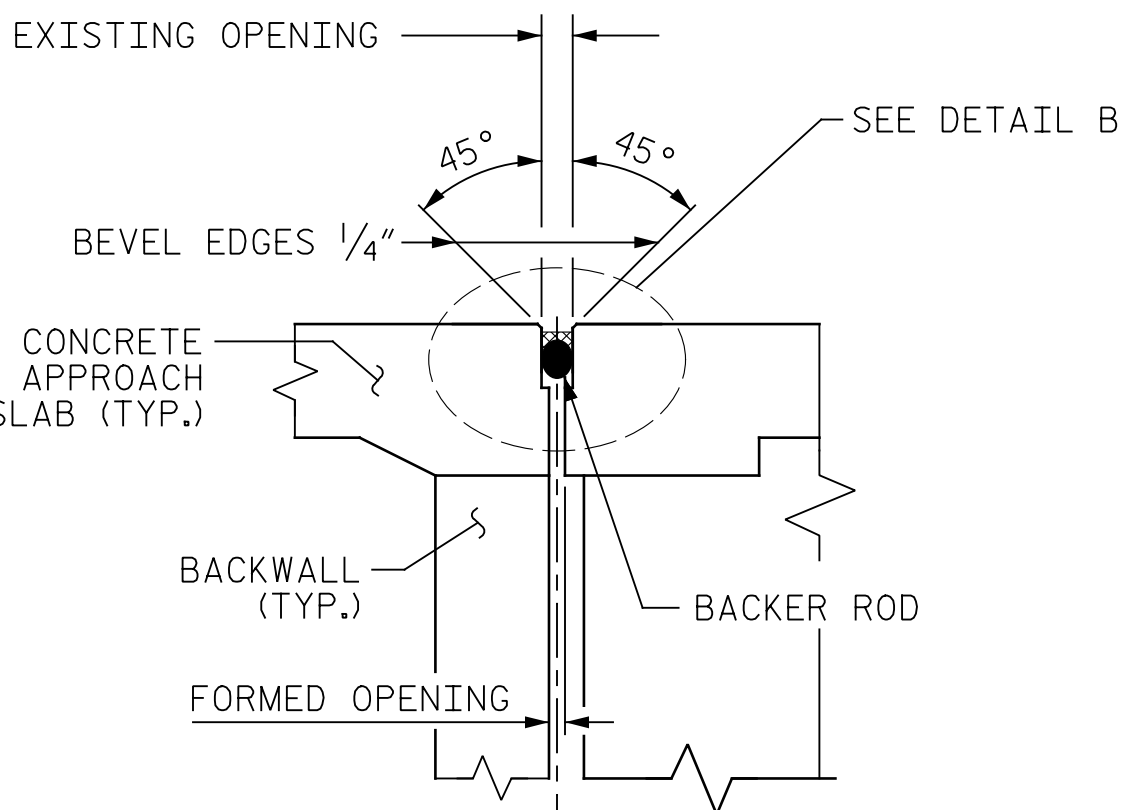
PLAN

*SELF LEVELING SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.

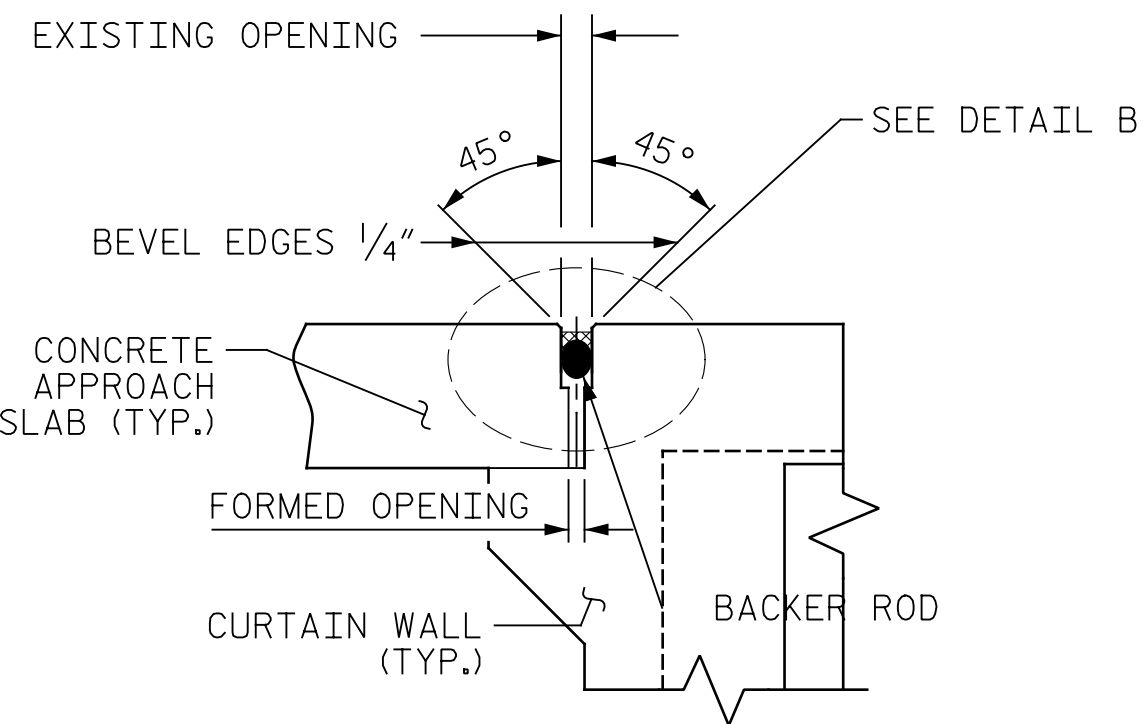
	SILICONE JOINT SEAL (LF)				
BRIDGE NO.	EB 1	BENT 1	BENT 2	BENT 3	EB 2
430023	53.8	-	-	-	53.8
430036	37.1	-	-	-	37.1
430112	46.6	-	-	-	46.6
430211	38.0	-	-	-	38.0
430374	39.0	-	-	-	39.0



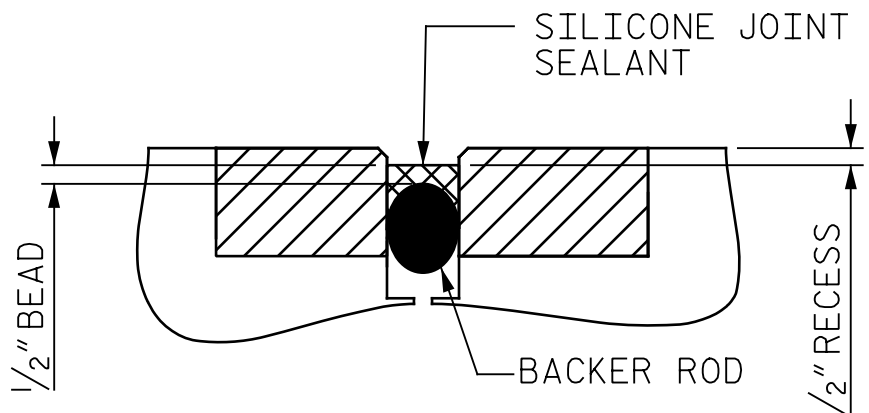
PROPOSED SILICONE JOINT SEAL
(430036, 430112, 430211)



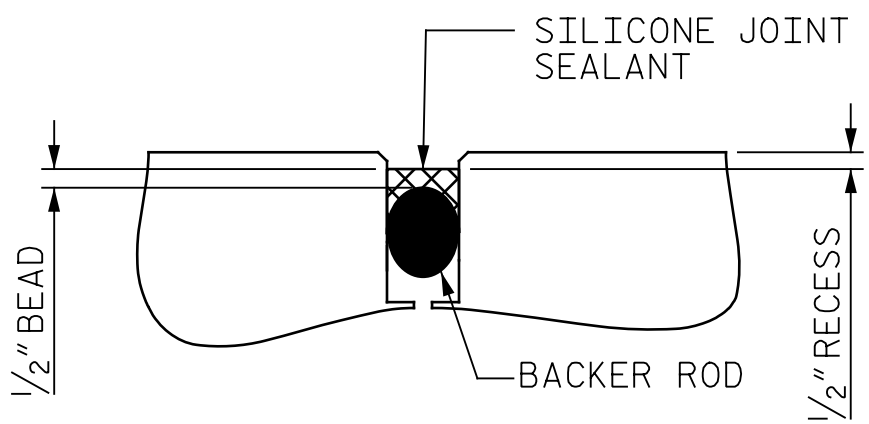
PROPOSED SILICONE JOINT SEAL
(430374)



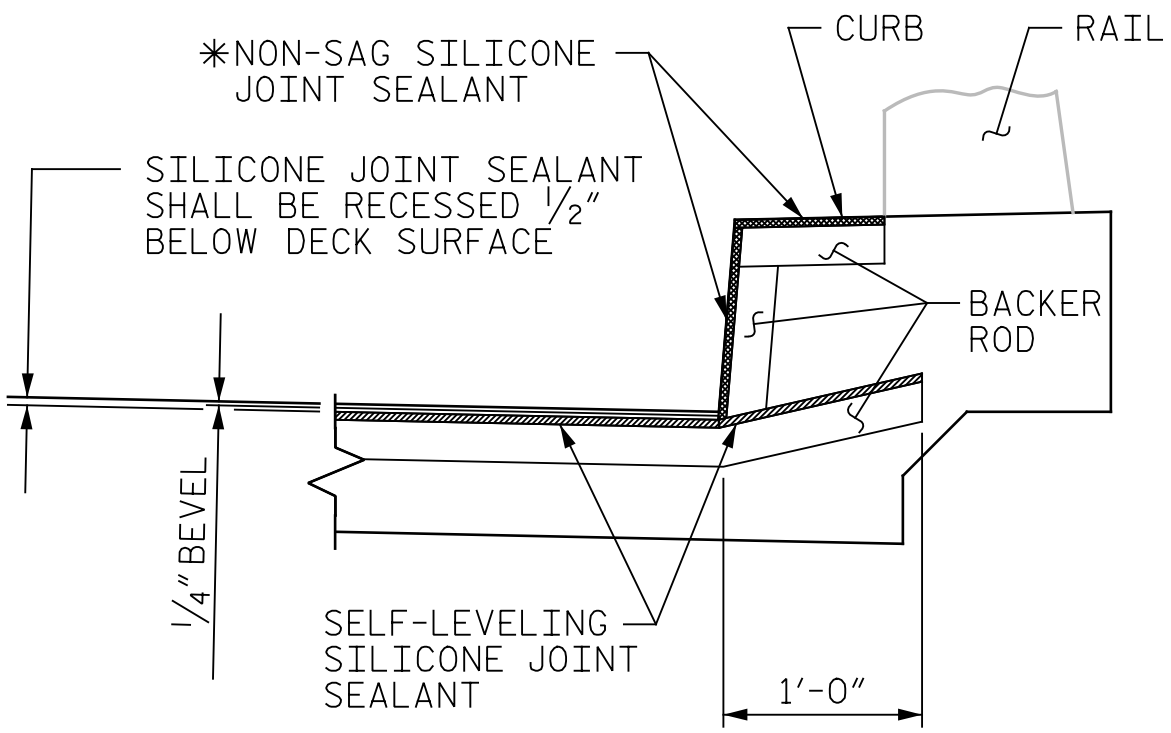
PROPOSED SILICONE JOINT SEAL
(430023)



DETAIL A



DETAIL B



SECTION D-D

JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
BRIDGE NO. 23, 36, 112, 211, 374



DocuSigned by:
Eric B. Nelson, Jr.
4/3/2018

PLANS PREPARED BY:
Gannett Fleming
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO. S-38
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

REPAIR INSTALLATION PROCEDURE

LOOSEN THE EXISTING BOLTS AND HOLD DOWN PLATES TO REMOVE AND REPLACE THE EXISTING GLAND. REMOVE THE EXISTING NEOPRENE SEALANT AND CLEAN THE EXISTING BASE ANGLE OF OIL, GREASE AND OTHER LATENTS.

LAY THE NEW GLAND ON THE BASE ANGLE AND FIELD MARK THE NEW GLAND FOR THE BOLT HOLES. HOLES IN THE NEW GLAND SHALL BE PUNCHED 1/8" IN DIAMETER WITH A HAND PUNCH.

IN ORDER TO CHECK FOR PROPER ALIGNMENT, PLACE THE NEW GLAND AND HOLD-DOWN PLATES ON THE BASE ANGLE. DO NOT APPLY NEW NEOPRENE SEALANT. BOLT THE HOLD-DOWN PLATES TO THE BASE ANGLE, BUT DO NOT TIGHTEN. THE ENGINEER WILL INSPECT THE JOINT SEAL DEVICE FOR PROPER ALIGNMENT.

AFTER INSPECTION, REMOVE THE HOLD-DOWN PLATES AND NEW GLAND. APPLY NEW NEOPRENE SEALANT TO THE BASE ANGLE IN ACCORDANCE WITH THE "INSTALLATION SKETCH". PLACE NEW GLAND AND HOLD-DOWN PLATES ON THE BASE ANGLE. BOLT THE HOLD-DOWN PLATES TO THE BASE ANGLE ASSEMBLY AND TORQUE THE BOLTS TO 88 FT-LBS WITH A TORQUE WRENCH. CHECK THE TORQUE AFTER THREE (3) HOURS AND, IF NECESSARY, RE-TIGHTEN THE 88-LBS. A FINAL CHECK SHALL BE MADE AT SEVEN (7) DAYS. TORQUE SHALL NOT BE LESS THAN 80 FT-LBS AFTER SEVEN (7) DAYS.

AFTER PROPER TORQUING, CLEAN THE BOLT HOLE RECESSES AND THE RECESS BETWEEN THE JOINT SEAL DEVICE AND CONCRETE COMPLETELY FILL THE RECESSES WITH NEW NEOPRENE SEALANT.

REPAIR INSTALLATION PROCEDURE

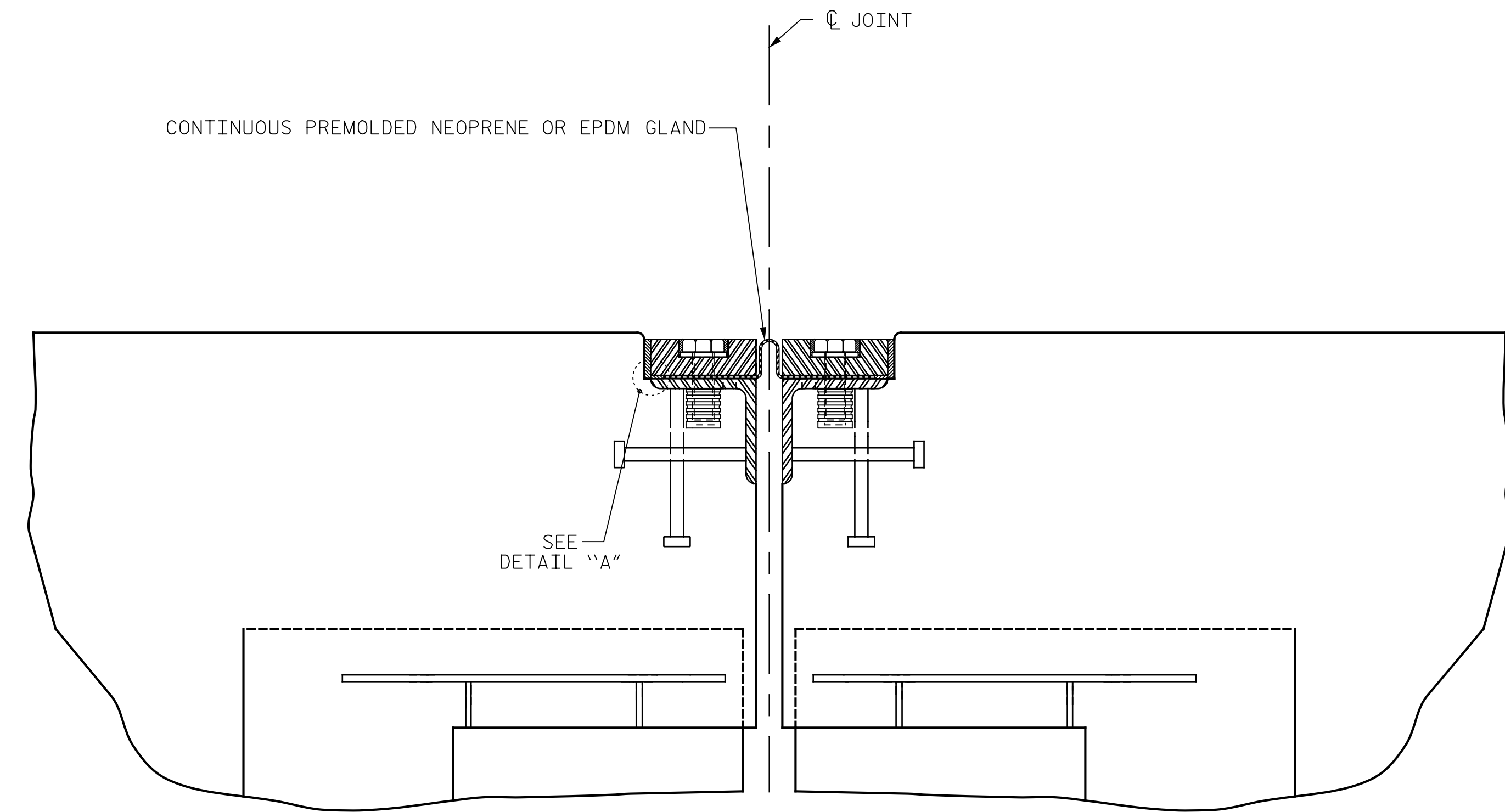
ALL HOLD-DOWN BOLTS SHALL CONFORM TO ASTM F593 ALLOY 304 STAINLESS STEEL AND WASHERS SHALL CONFORM TO ASTM F844 EXCEPT THEY SHALL BE MADE FROM ALLOY 304 STAINLESS STEEL.

A PREMOLDED CORRUGATED OR NON-CORRUGATED GLAND SHALL BE USED FOR JOINTS SKEWED BETWEEN 50° THRU 130°.

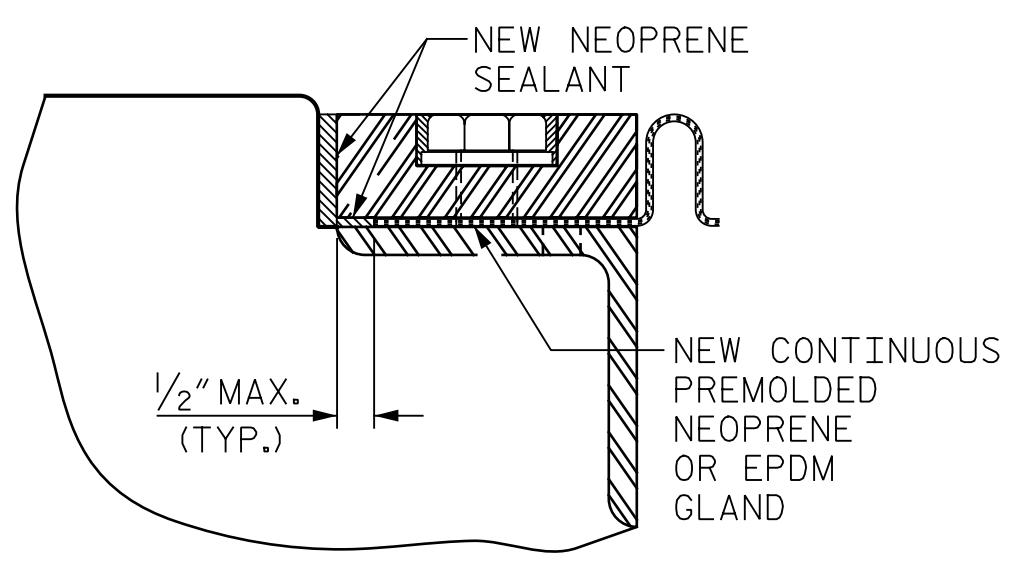
THE FINISHED EXPANSION SEAL DEVICE SHALL BE A MINIMUM 1/8" AND A MAXIMUM OF 1" BELOW THE TOP OF SLAB.

FOR EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

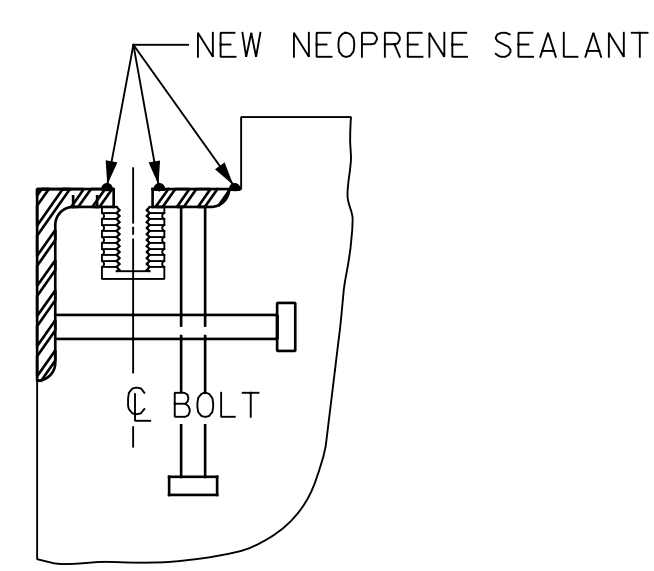
NO SEPARATE PAYMENT WILL BE MADE FOR REMOVING AND REINSTALLING MEDIAN AND BARRIER RAIL COVER PLATES. THE ENTIRE COST OF THE WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "EXPANSION JOINT SEALS".



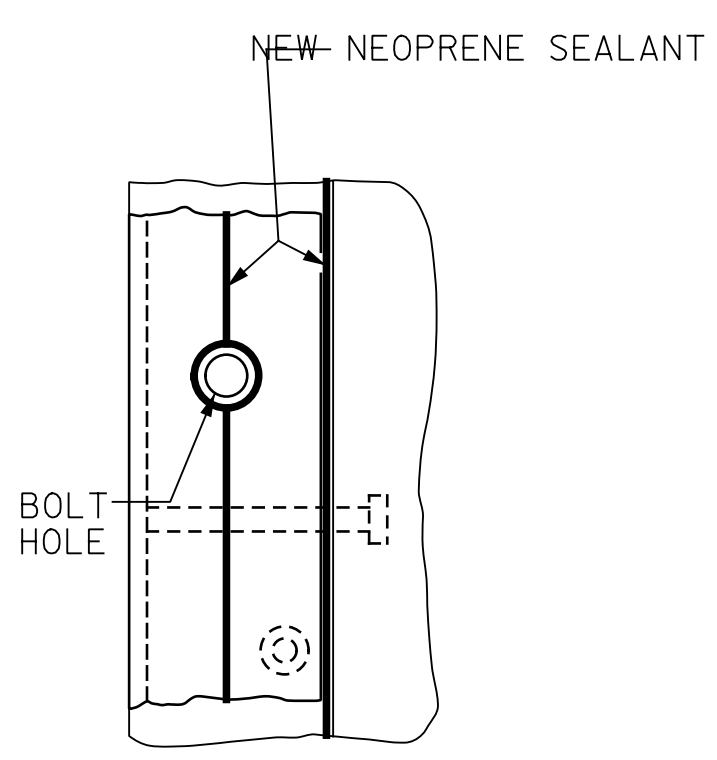
EXPANSION JOINT SEAL
(EXISTING)



DETAIL "A"

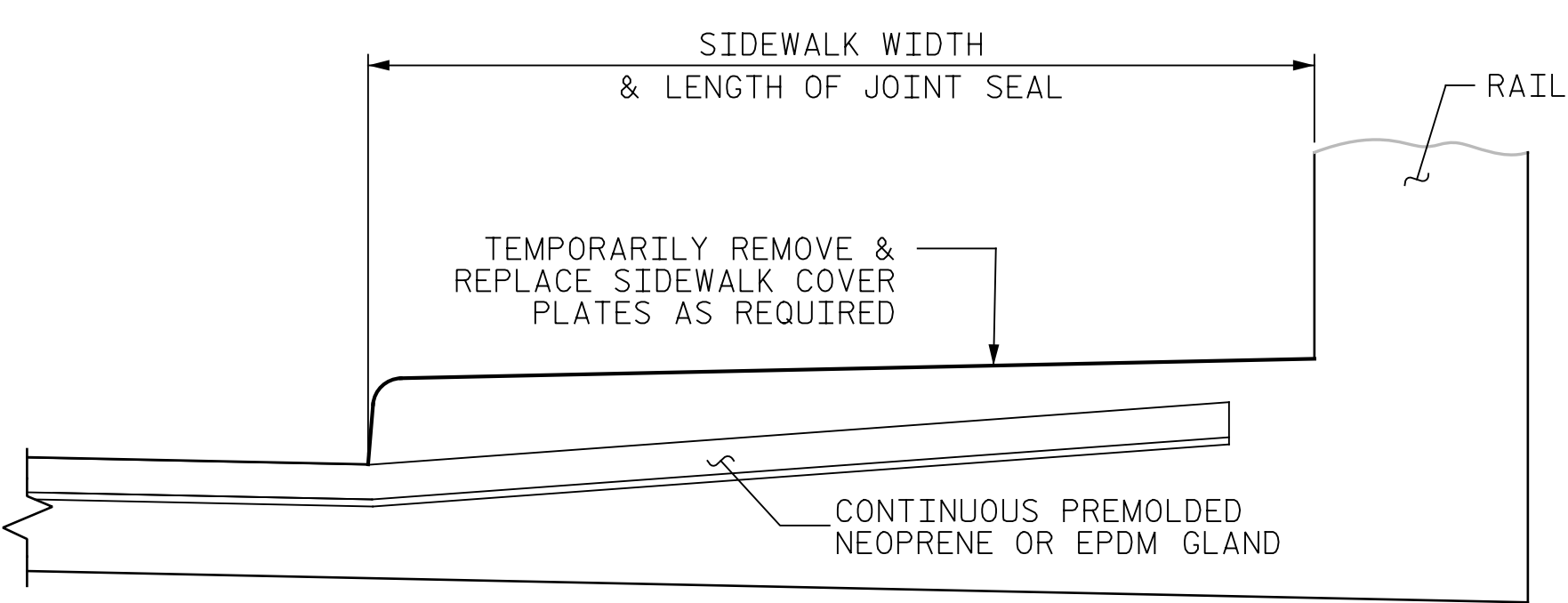


CROSS SECTION



PLAN VIEW

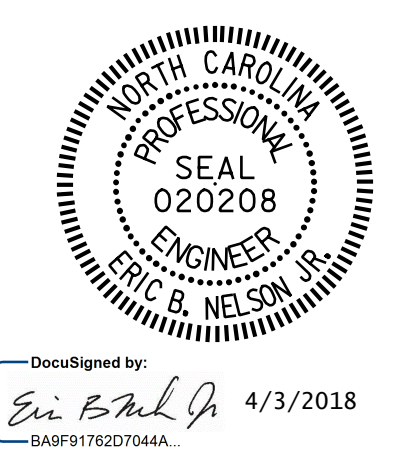
INSTALLATION SKETCH



JOINT SEAL DETAILS AT SIDEWALK

	EXPANSION JOINT SEAL REPAIR (LF)				
BRIDGE NO.	EB 1	BENT 1	BENT 2	BENT 3	EB 2
430107	-	48.3	48.3	-	-
430445	-	50.9	50.9	50.9	-

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
BRIDGE NO. 107, 445



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAIL FOR
EXPANSION JOINT
SEAL REPAIR

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-39
1			3			TOTAL SHEETS
2			4			142

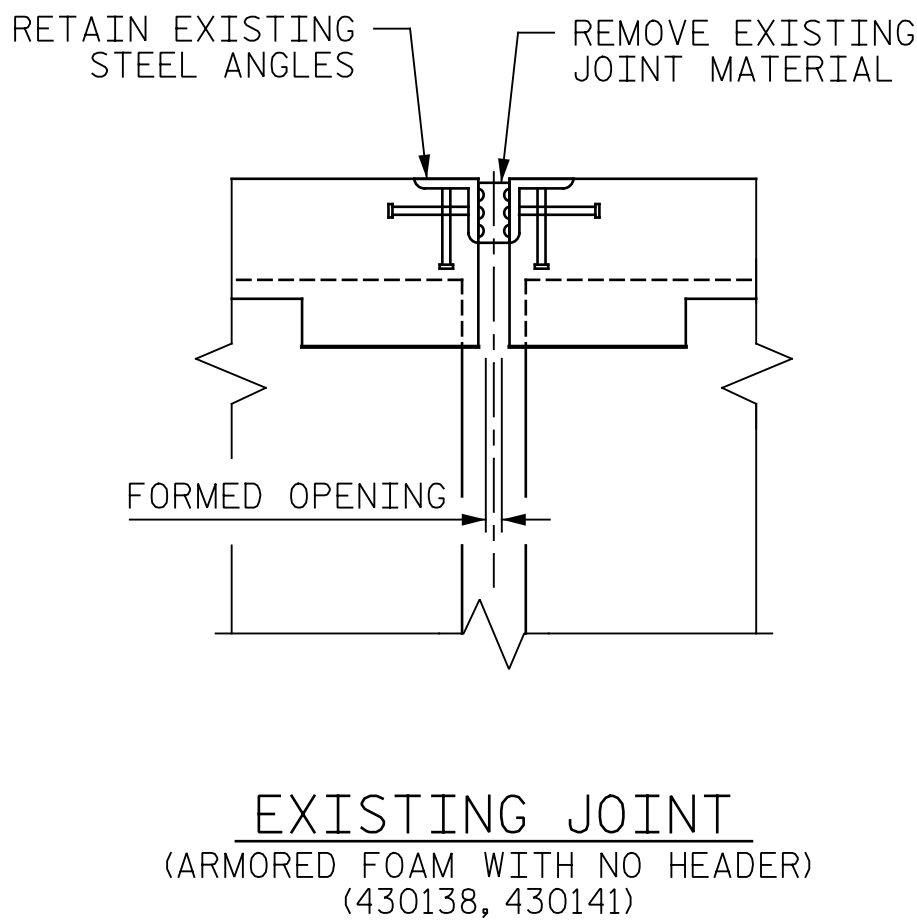
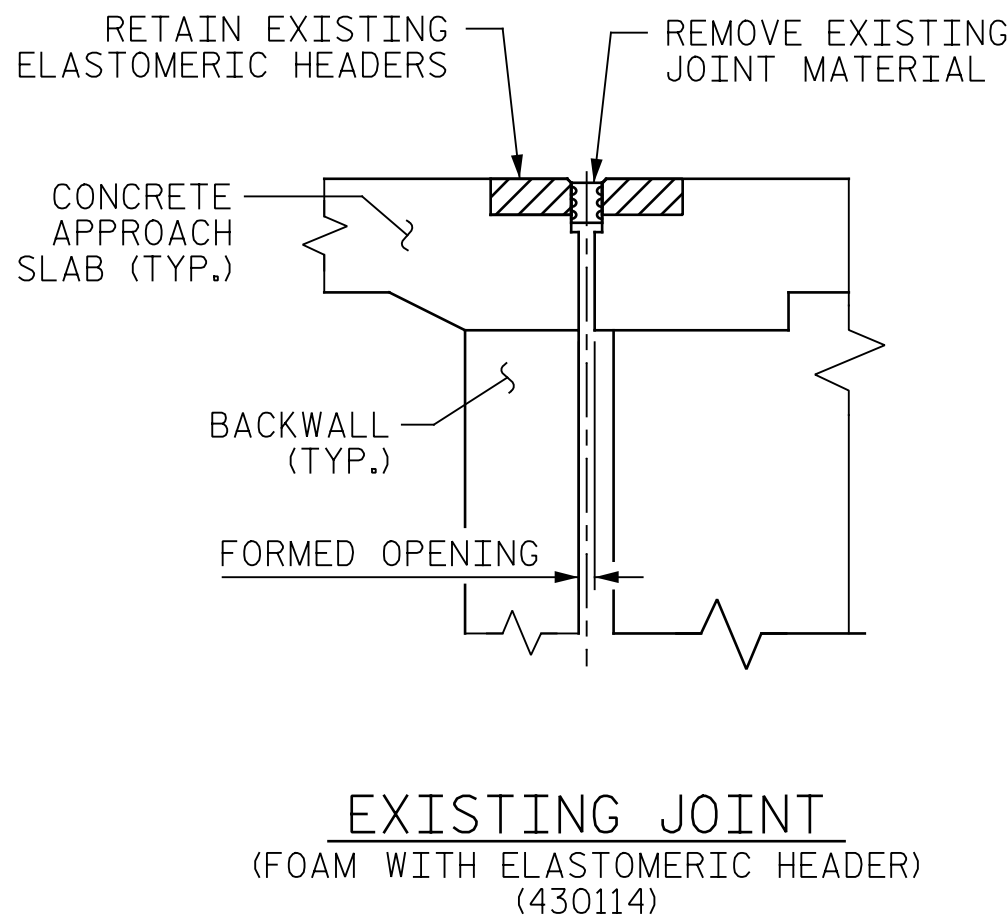
NOTES

FOR SYNTHETIC RUBBER JOINT SEAL, SEE SPECIAL PROVISIONS.

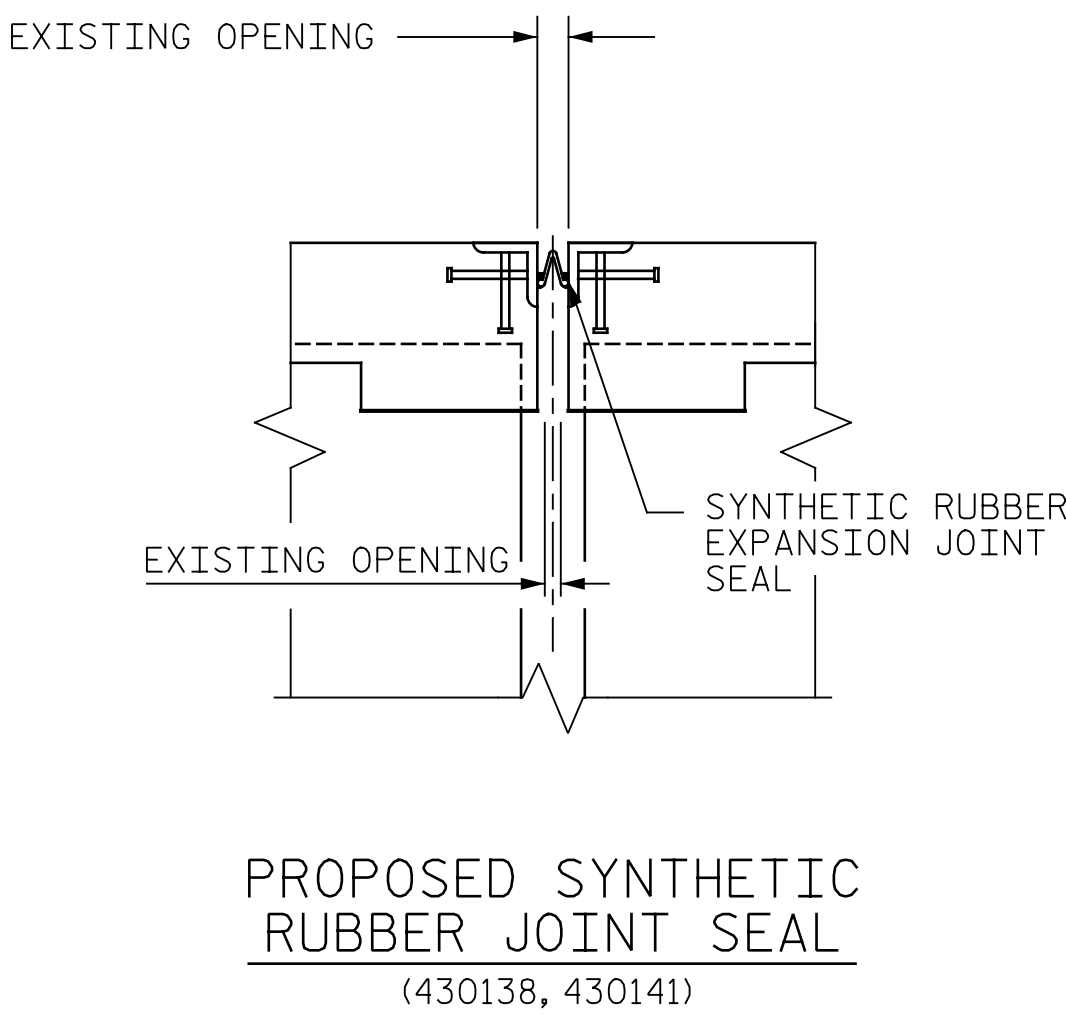
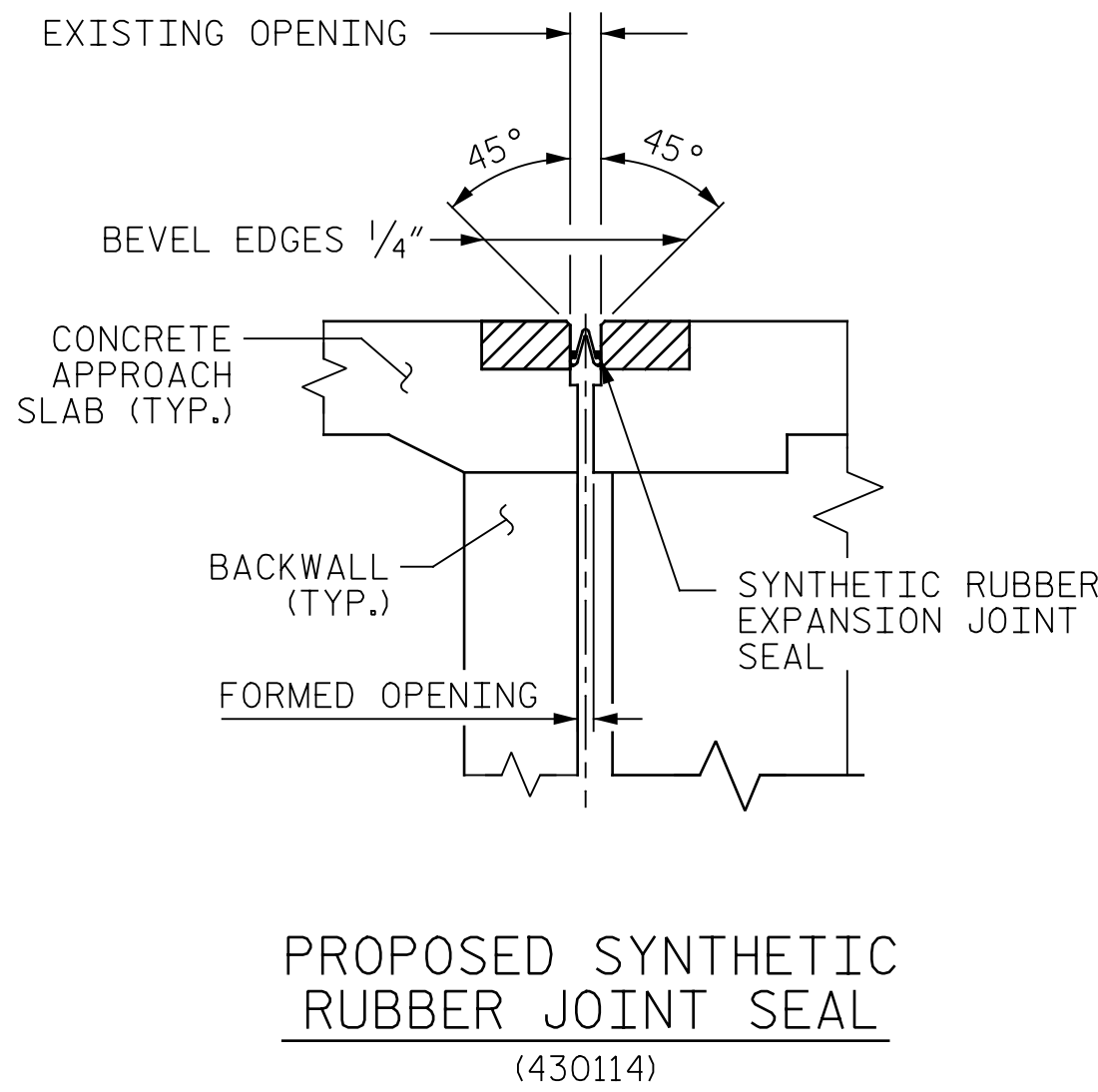
FOR 430114, PROVIDE JOINT SEALS AT END BENT 1 AND END BENT 2 WITH A MOVEMENT RATING OF 4".

FOR 430138, PROVIDE JOINT SEALS AT BENTS 1, 2 & 3 WITH A MOVEMENT RATING OF 2 1/4".

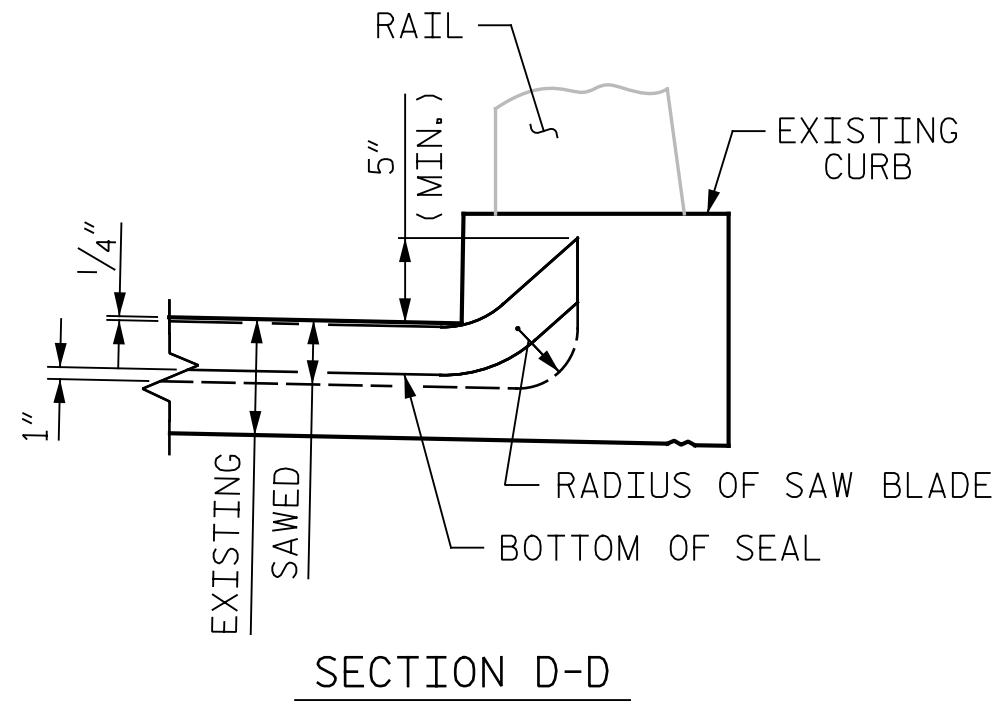
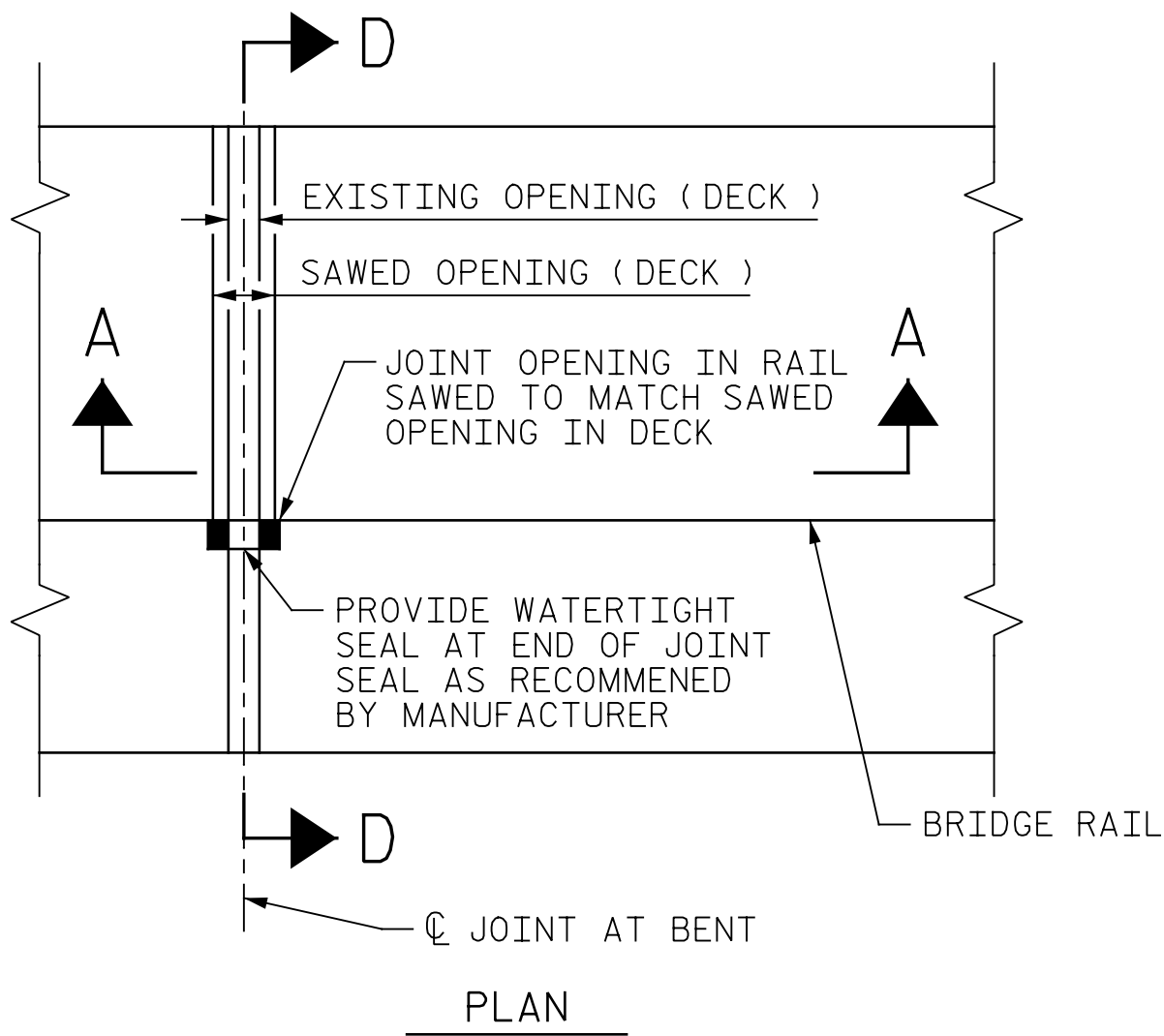
FOR 430141, PROVIDE JOINT SEALS AT BENTS 1, 2 & 3 WITH A MOVEMENT RATING OF 2 1/4".



EXISTING JOINT TYPES



SECTION A-A
PROPOSED JOINT



JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
HAYWOOD COUNTY
BRIDGE NO. 114, 138, 141

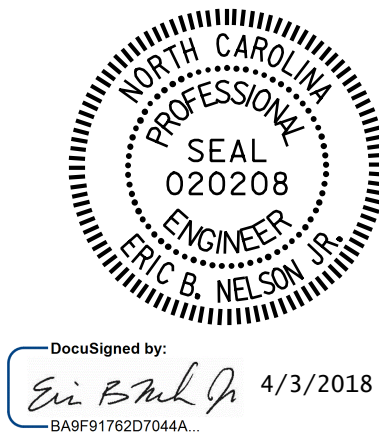
	SYNTHETIC RUBBER JOINT SEAL (LF)				
BRIDGE NO.	EB 1	BENT 1	BENT 2	BENT 3	EB 2
430114	61.0	-	-	-	61.0
430138	-	61.3	61.3	61.3	-
430141	-	61.3	61.3	61.3	-

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered **As Promised**

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

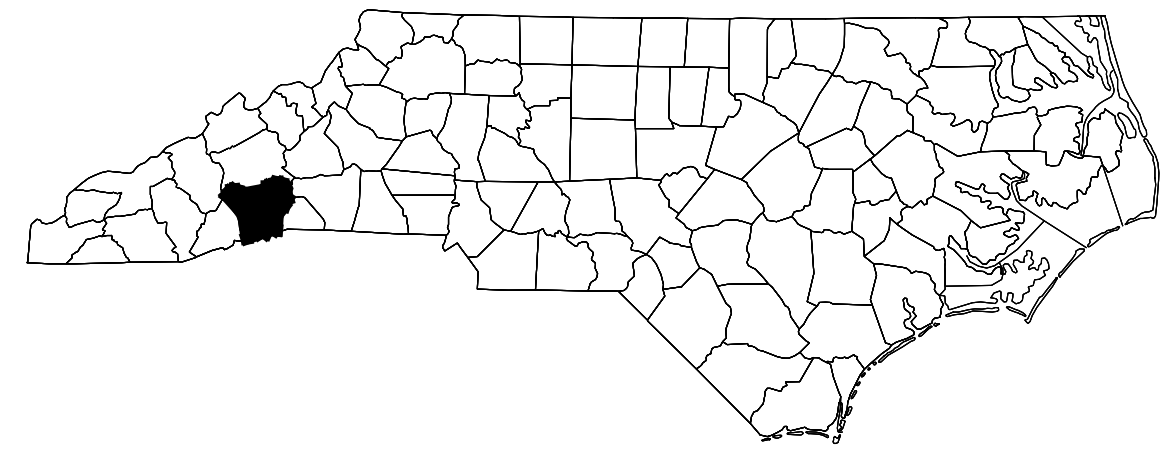
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAIL
FOR SYNTHETIC
RUBBER JOINT SEAL

REVISIONS						SHEET NO. S-40
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

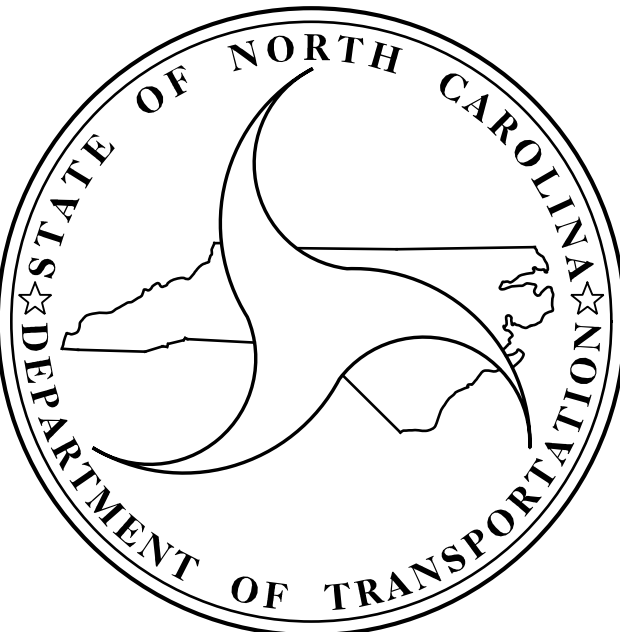
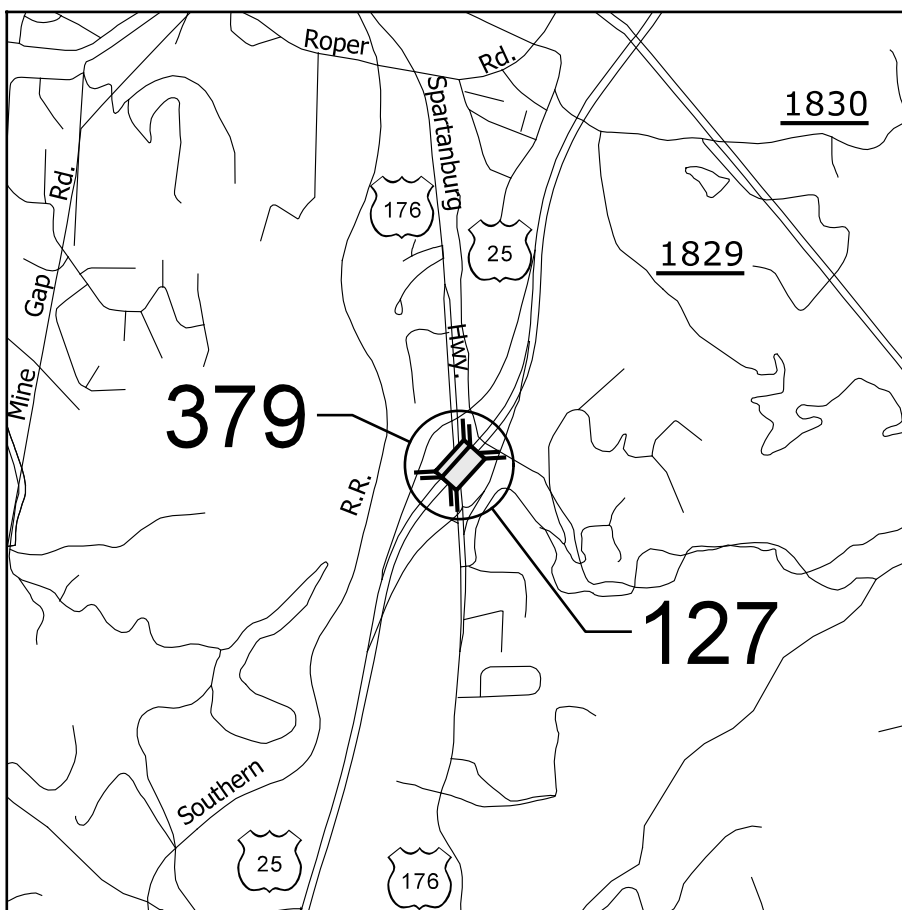
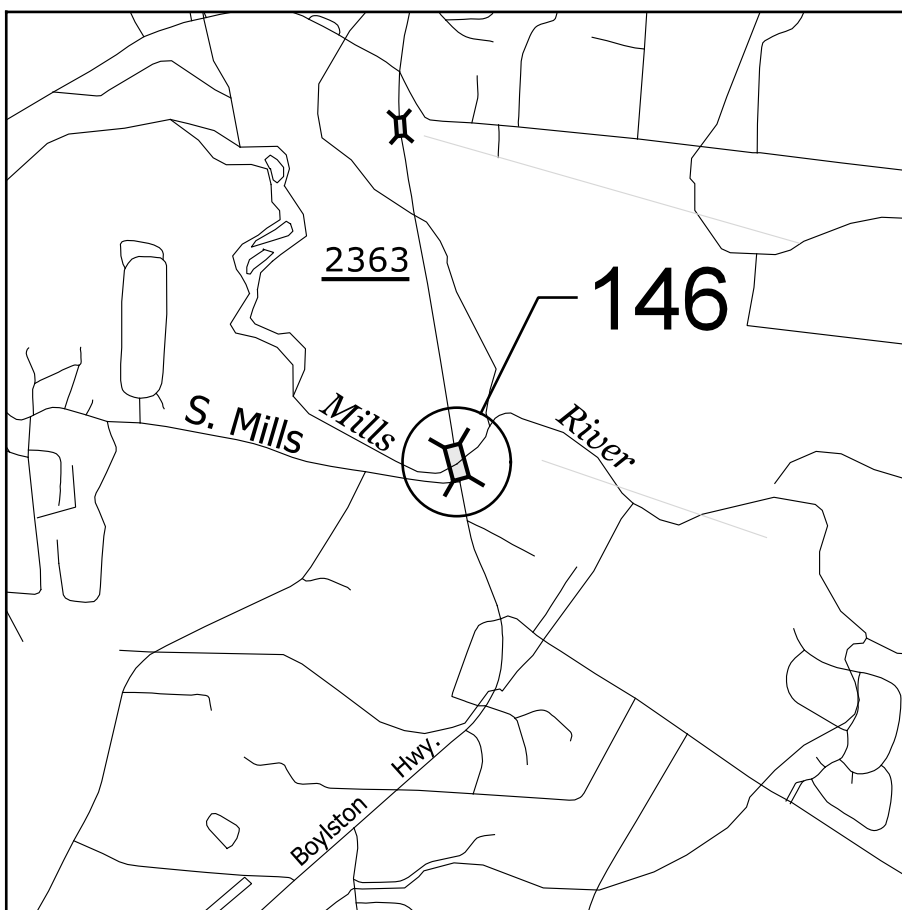
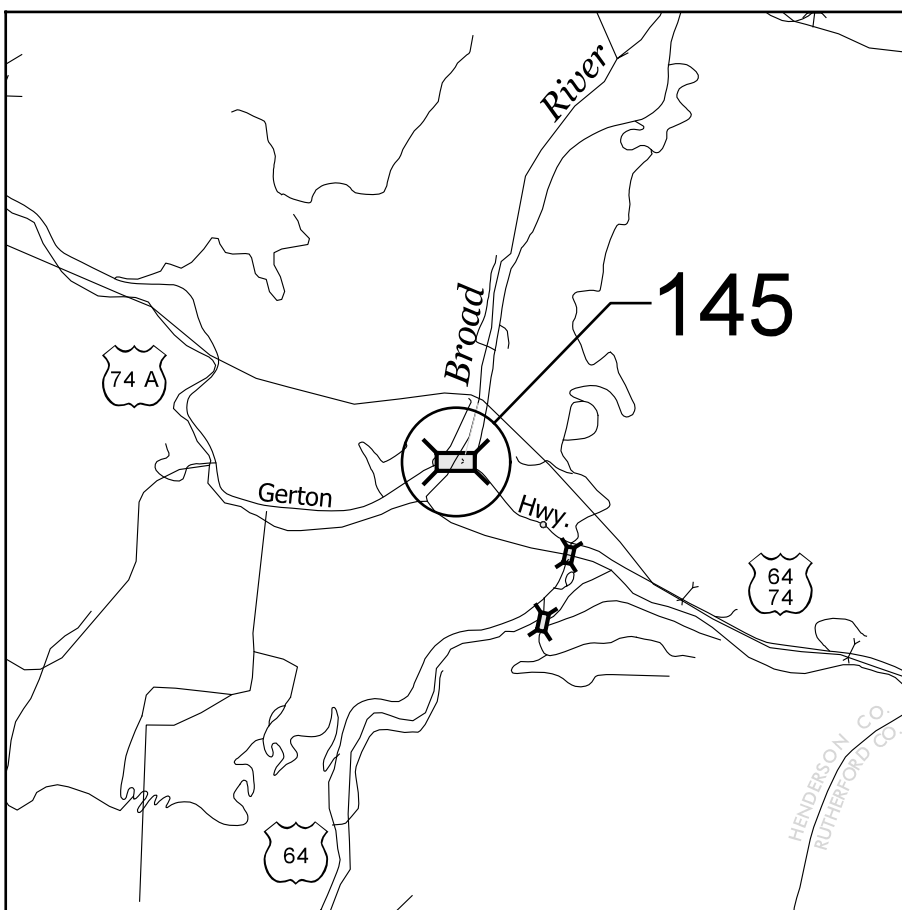
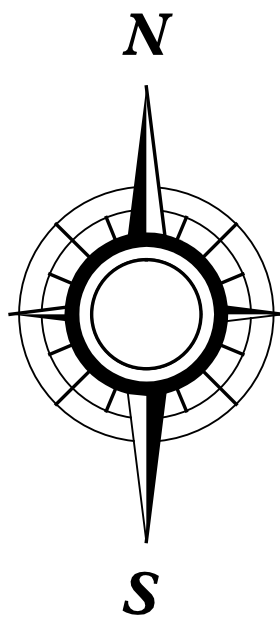
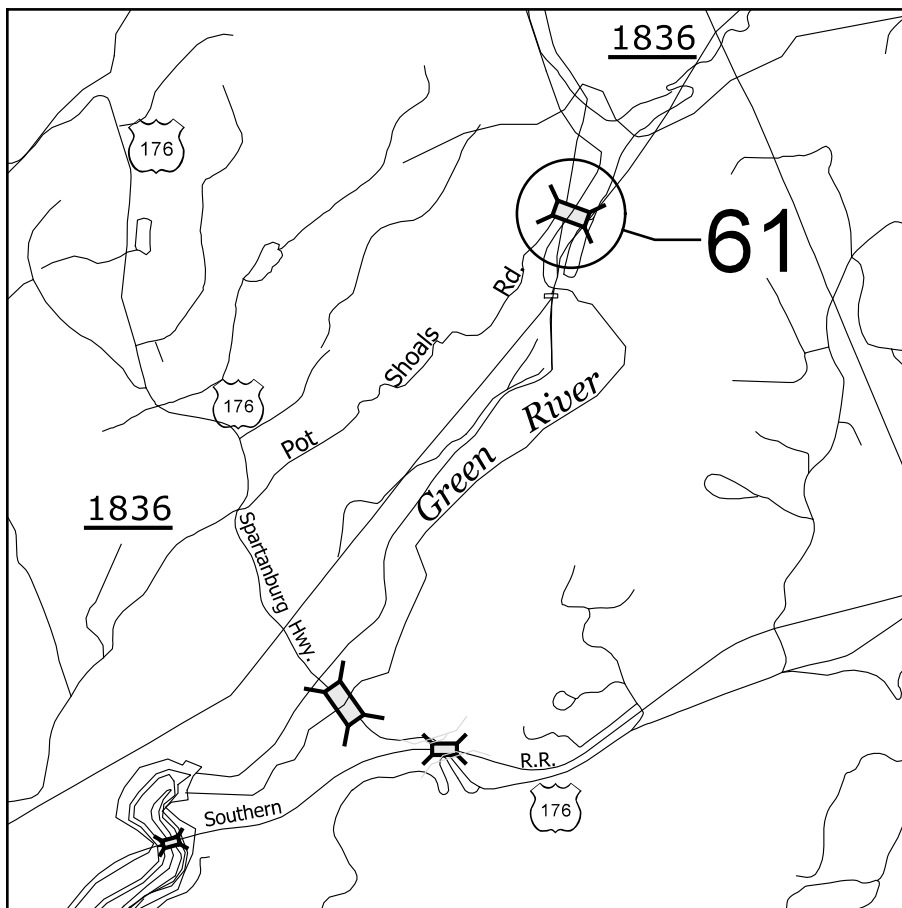
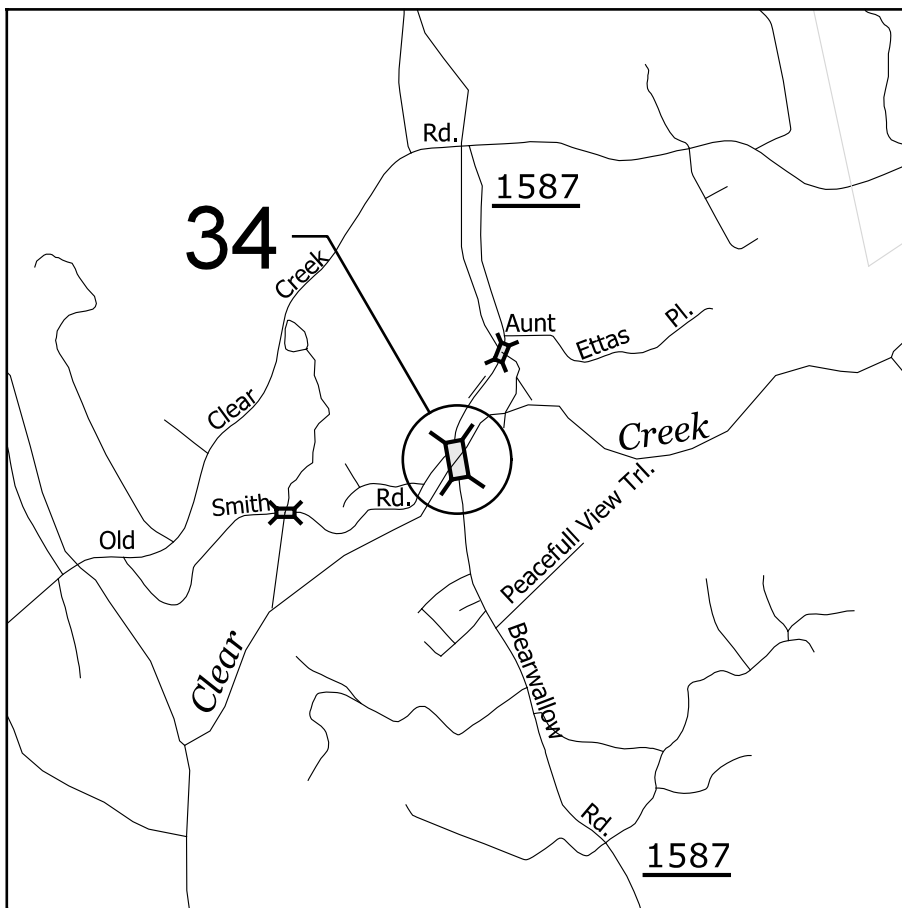
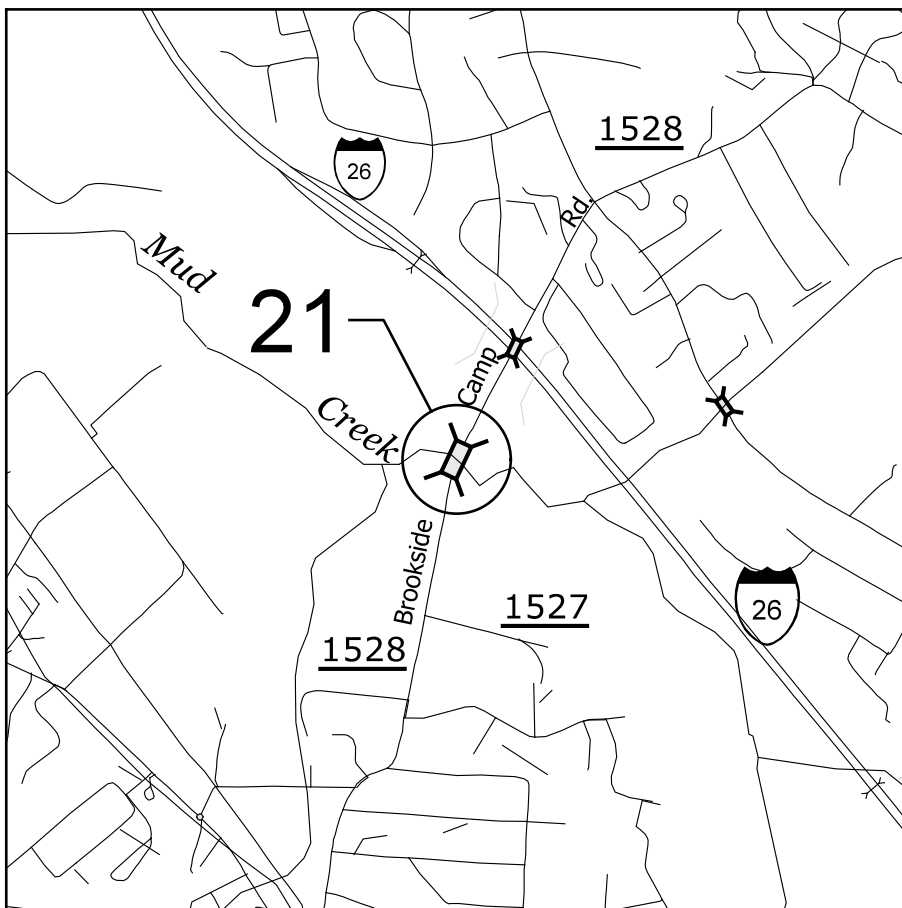
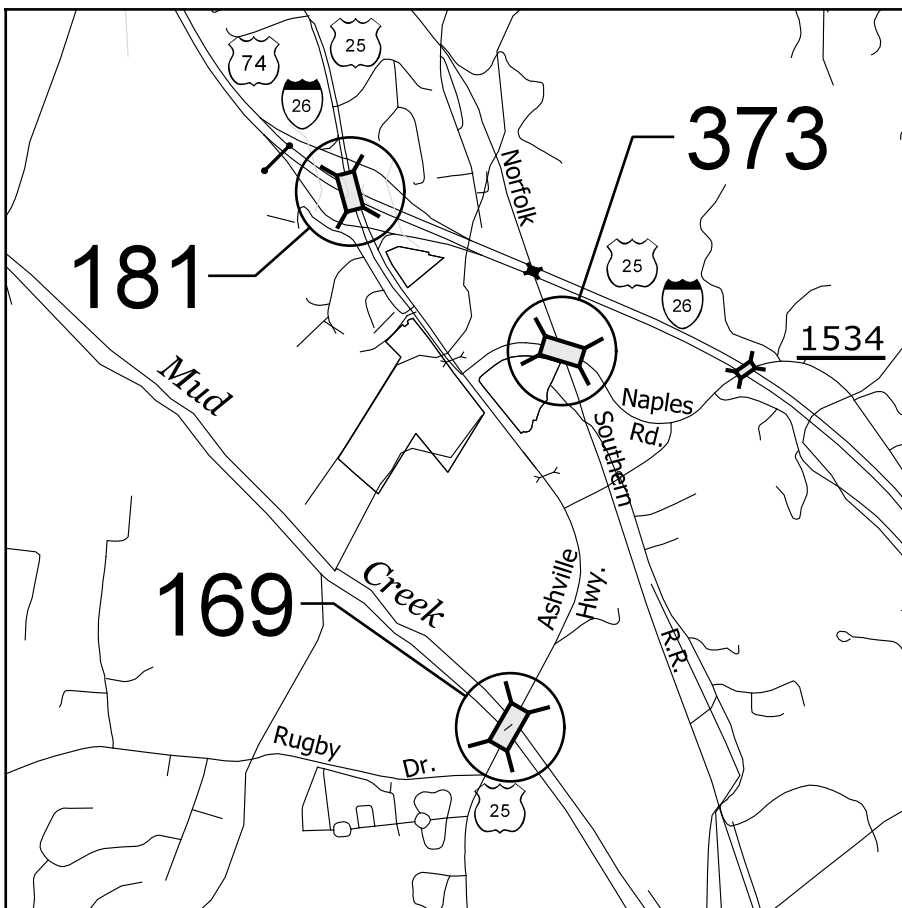
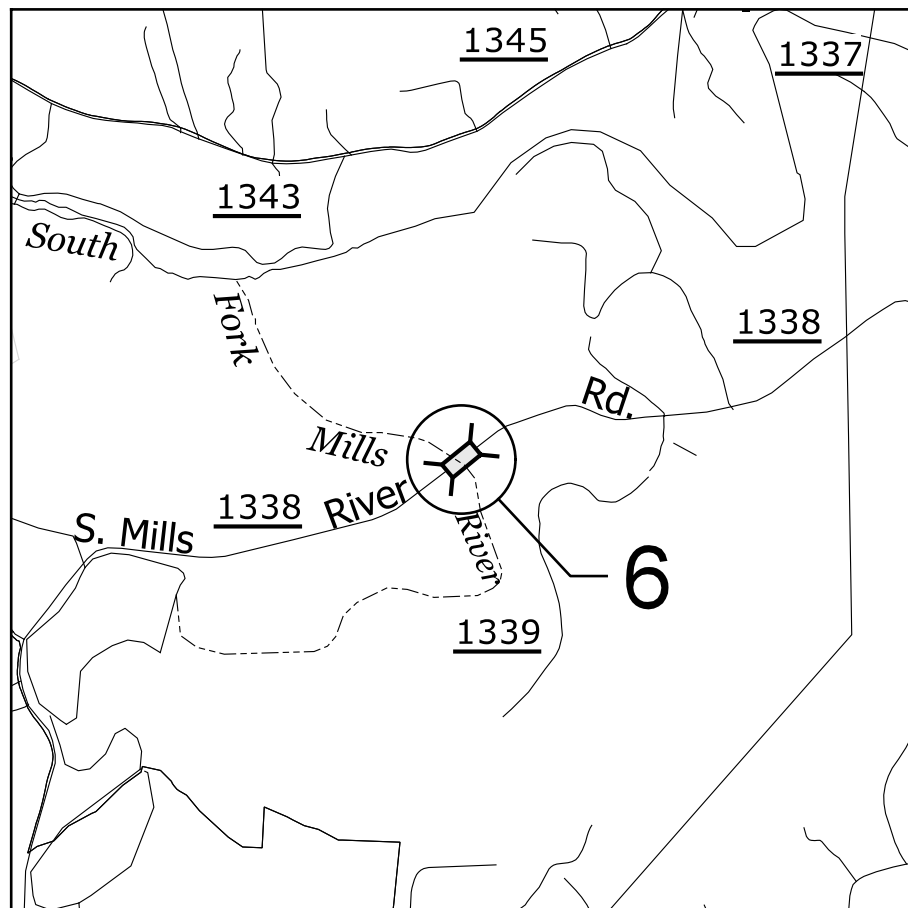


HENDERSON COUNTY

LOCATION: HENDERSON COUNTY:

- BRIDGE #006 ON SR1338 OVER SOUTH FORK MILLS RIVER.
BRIDGE #021 ON SR1528 OVER MUD CREEK.
BRIDGE #034 ON SR1587 OVER CLEAR CREEK.
BRIDGE #061 ON SR1836 OVER GREEN RIVER.
BRIDGE #127 ON US25 OVER US176
BRIDGE #145 ON US74A OVER BROAD RIVER
- BRIDGE #146 ON NC191 OVER MILLS RIVER
BRIDGE #169 ON US25 OVER MUD CREEK
BRIDGE #181 ON US25 OVER I26, US74
BRIDGE #373 ON SR1534 OVER NORFOLK SOUTHERN RAIL
BRIDGE #379 ON US25 OVER US176

TYPE OF WORK: BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENTS



DESIGN DATA		
HENDERSON COUNTY		
#006	ADT 2014	= 2,600
#021	ADT 2014	= 4,000
#034	ADT 2014	= 450
#061	ADT 2000	= 30
#127	ADT 2014	= 14,000
#145	ADT 2015	= 890
#146	ADT 2014	= 25,000
#169	ADT 2014	= 29,000
#181	ADT 2014	= 27,000
#373	ADT 2014	= 2,100
#379	ADT 2014	= 15,000

PROJECT LENGTH		
HENDERSON COUNTY		
#006	=	0.024 MILE
#021	=	0.042 MILE
#034	=	0.031 MILE
#061	=	0.030 MILE
#127	=	0.042 MILE
#145	=	0.037 MILE
#146	=	0.030 MILE
#169	=	0.071 MILE
#181	=	0.062 MILE
#373	=	0.058 MILE
#379	=	0.042 MILE

PLANS PREPARED BY:

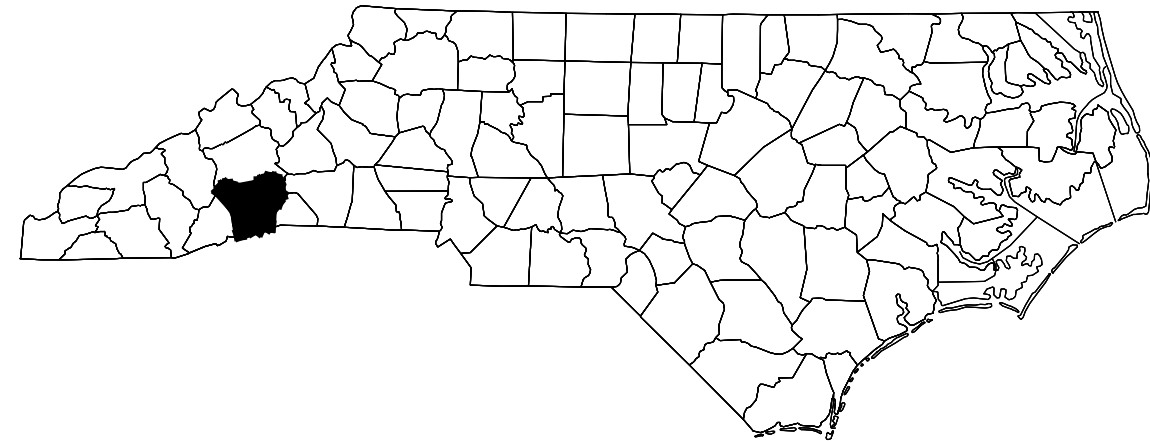


Gannett Fleming
Excellence Delivered **As Promised**

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DocuSigned by:
Eric B. Nelson Jr.
BA0F91762D7044A
4/3/2018





STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-42

HENDERSON COUNTY

LOCATION: HENDERSON COUNTY:

- BRIDGE #006 ON SR1338 OVER SOUTH FORK MILLS RIVER.

BRIDGE #021 ON SR1528 OVER MUD CREEK.

BRIDGE #034 ON SR1587 OVER CLEAR CREEK.

BRIDGE #061 ON SR1836 OVER GREEN RIVER.

BRIDGE #127 ON US25 OVER US176

BRIDGE #145 ON US74A OVER BROAD RIVER
- BRIDGE #146 ON NC191 OVER MILLS RIVER

BRIDGE #169 ON US25 OVER MUD CREEK

BRIDGE #181 ON US25 OVER I26, US74

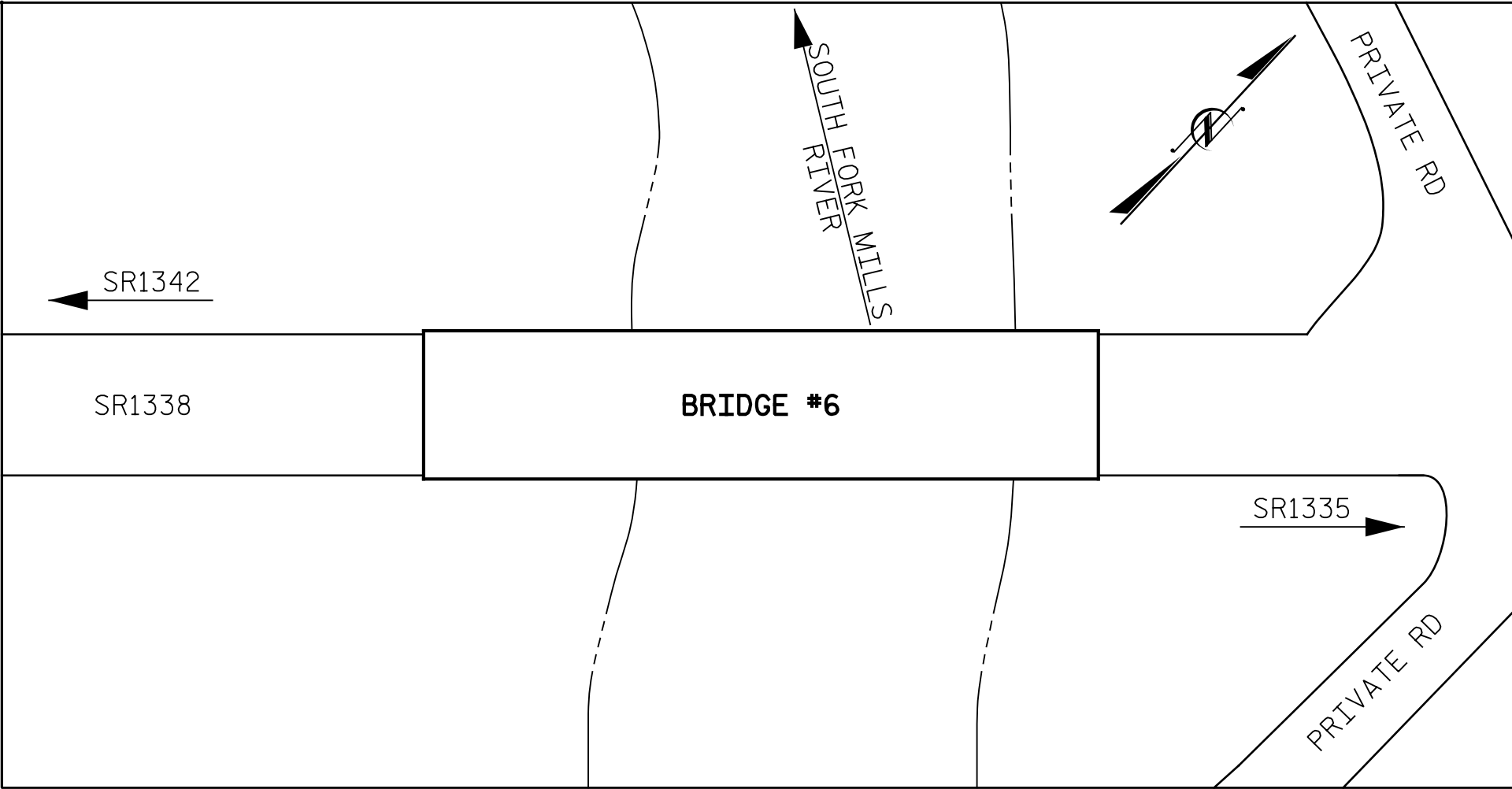
BRIDGE #373 ON SR1534 OVER NORFOLK SOUTHERN RAIL

BRIDGE #379 ON US25 OVER US176

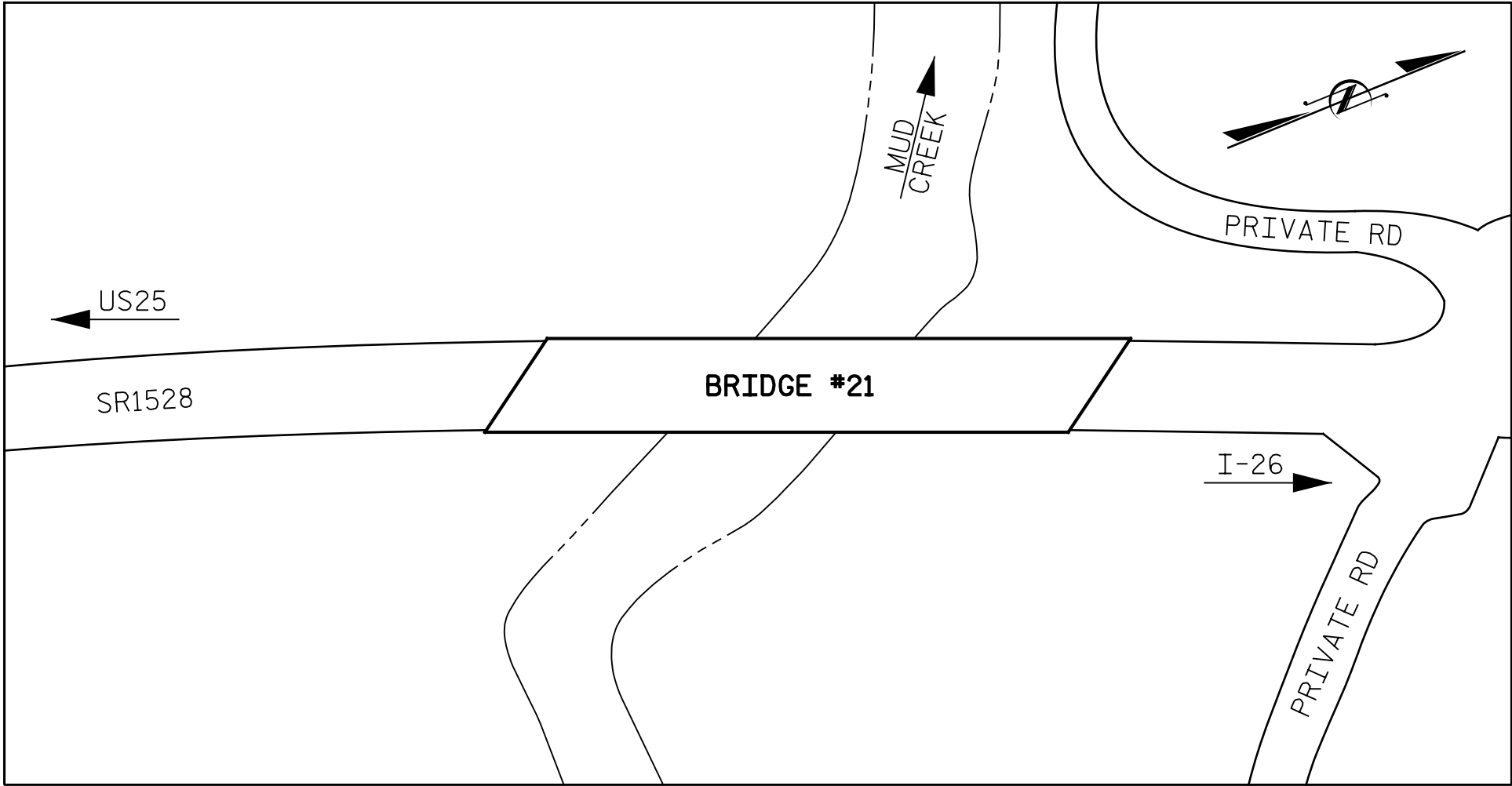
TYPE OF WORK: BRIDGE PRESERVATION – BRIDGE JOINT REPLACEMENTS

INDEX OF SHEETS

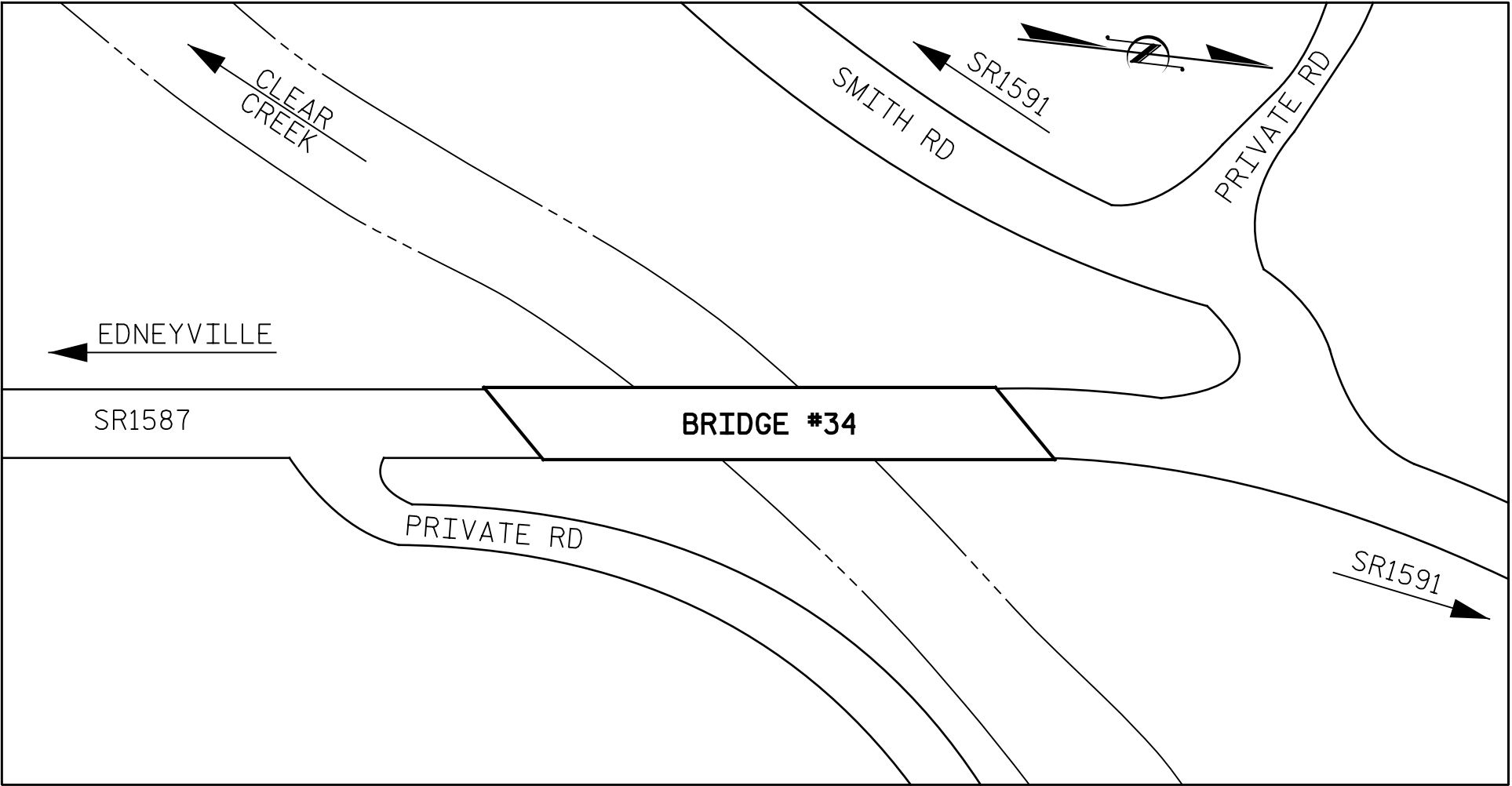
SHEET NO.	DESCRIPTION
S-41	TITLE SHEET
S-42	INDEX OF SHEETS
S-43 THRU S-50	STRUCTURAL PLANS – JOINT REPLACEMENTS



BRIDGE #6



BRIDGE #21



BRIDGE #34

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

GENERAL NOTES

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR SYNTHETIC RUBBER EXPANSION JOINT SEAL, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

BILL OF MATERIAL FOR HENDERSON COUNTY

	VOLUMETRIC MIXER	FOAM JOINT SEAL	SILICONE JOINT SEALANT	SYNTHETIC RUBBER EXPANSION JOINT SEAL	* CONCRETE FOR DECK REPAIR	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION
	LUMP SUM	LN. FT.	LN. FT.	LN. FT.	CU. FT.	CU. FT.	SQ. FT.
440006	LUMP SUM	32.0	33.0	-	-	15.0	60.0
440021	LUMP SUM	-	177.6	-	-	41.2	165.6
440034	LUMP SUM	-	93.2	-	-	10.9	43.6
440061	LUMP SUM	23.6	73.8	-	-	21.6	86.4
440127	LUMP SUM	-	111.8	-	-	26.4	105.8
440145	LUMP SUM	59.0	59.0	-	-	24.0	96.2
440146	LUMP SUM	-	352.4	-	-	85.2	340.4
440169	LUMP SUM	-	-	236.1	-	34.2	136.8
440181	LUMP SUM	-	-	254.6	-	56.6	226.4
440373	LUMP SUM	-	94.2	-	-	22.6	90.2
440379	LUMP SUM	-	110.0	-	-	26.0	52
TOTAL	LUMP SUM	114.6	1105.0	490.7	-	363.7	1403.4

* ESTIMATED QUANTITY FOR BIDDING PURPOSES.

PROJECT NO. 14BPR.3.1
HENDERSON COUNTY

SHEET 1 OF 2



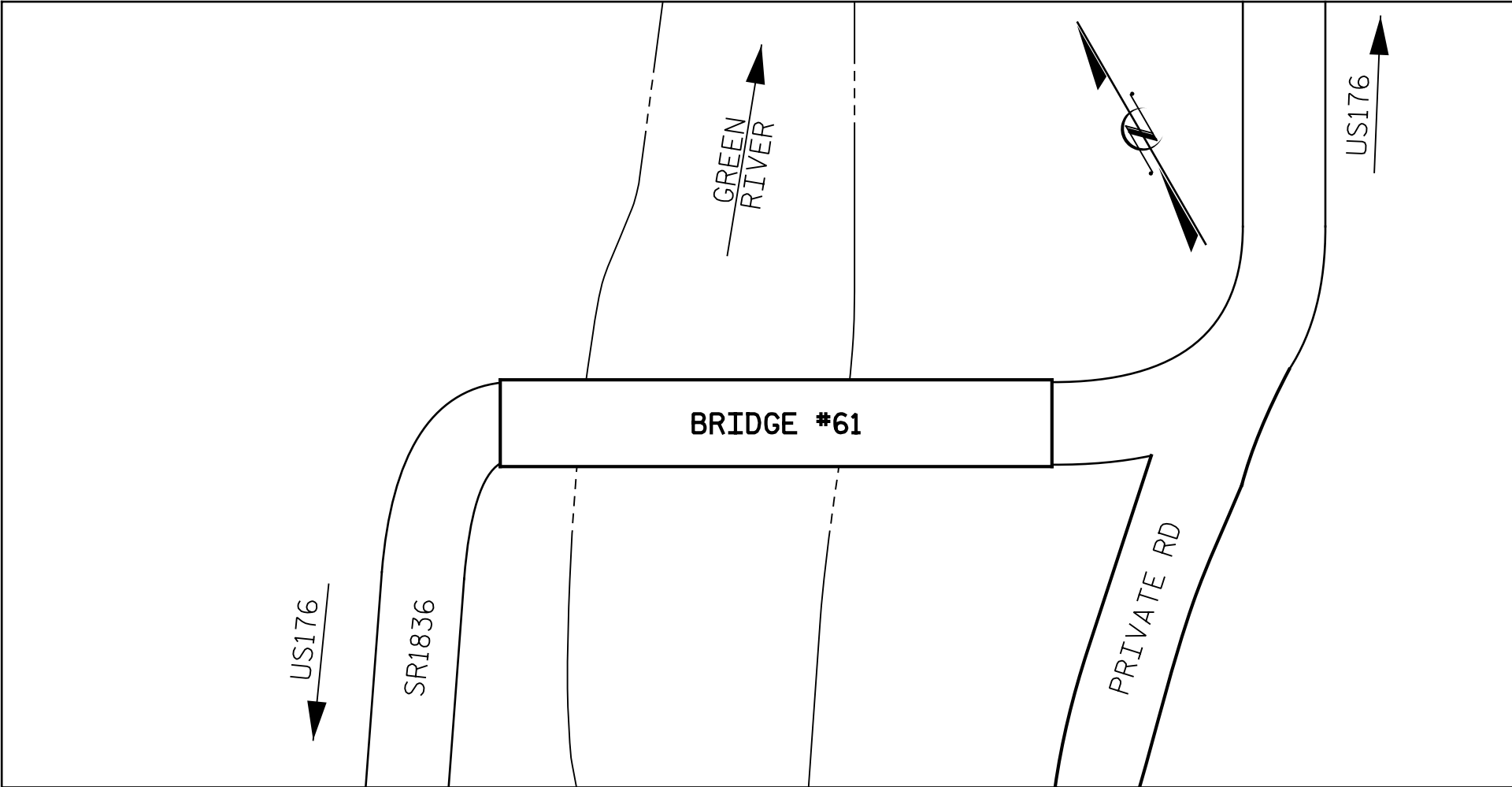
DocuSigned by:
Eric B. Nelson Jr. 4/3/2018

PLANS PREPARED BY:
Gannett Fleming
2610 Wycliff Road
Suite 102
Raleigh, NC 27607-3073
(919) 420-7660
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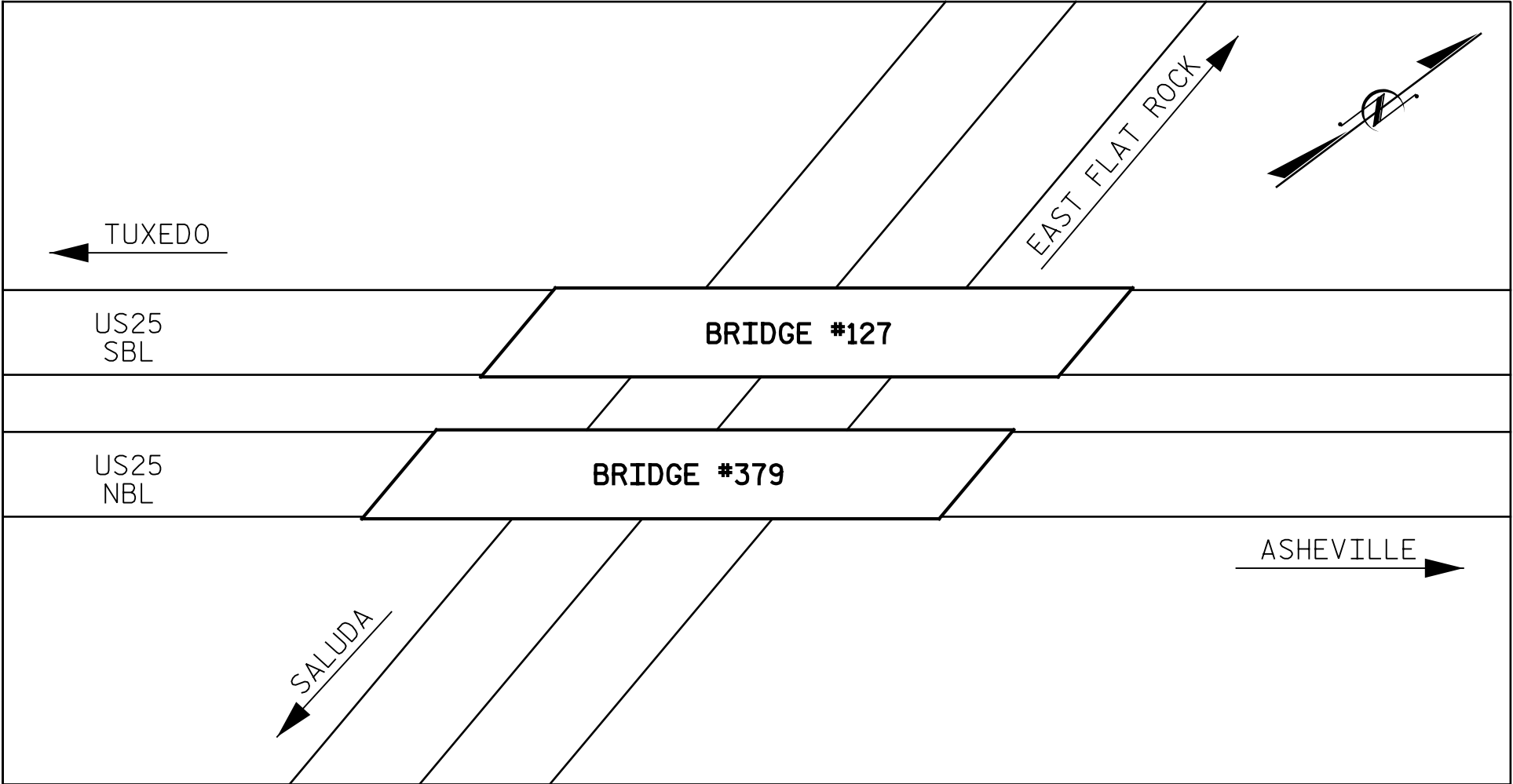
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-43		
BILL OF MATERIAL & BRIDGE LOCATION SKETCHES						TOTAL SHEETS 142		
REVISIONS								
NO.	BY:	DATE:	NO.	BY:	DATE:			
1			3					
2			4					

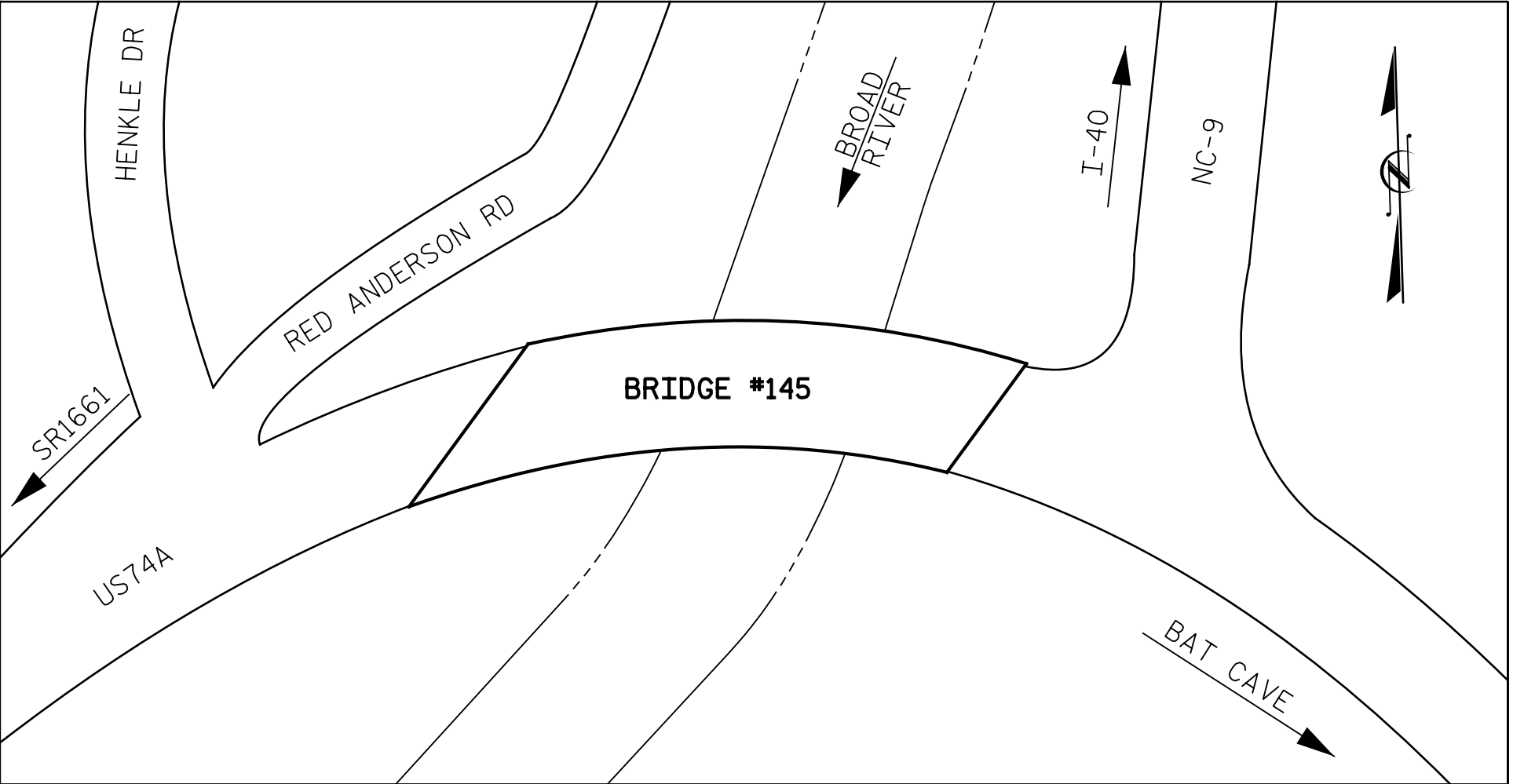
DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018



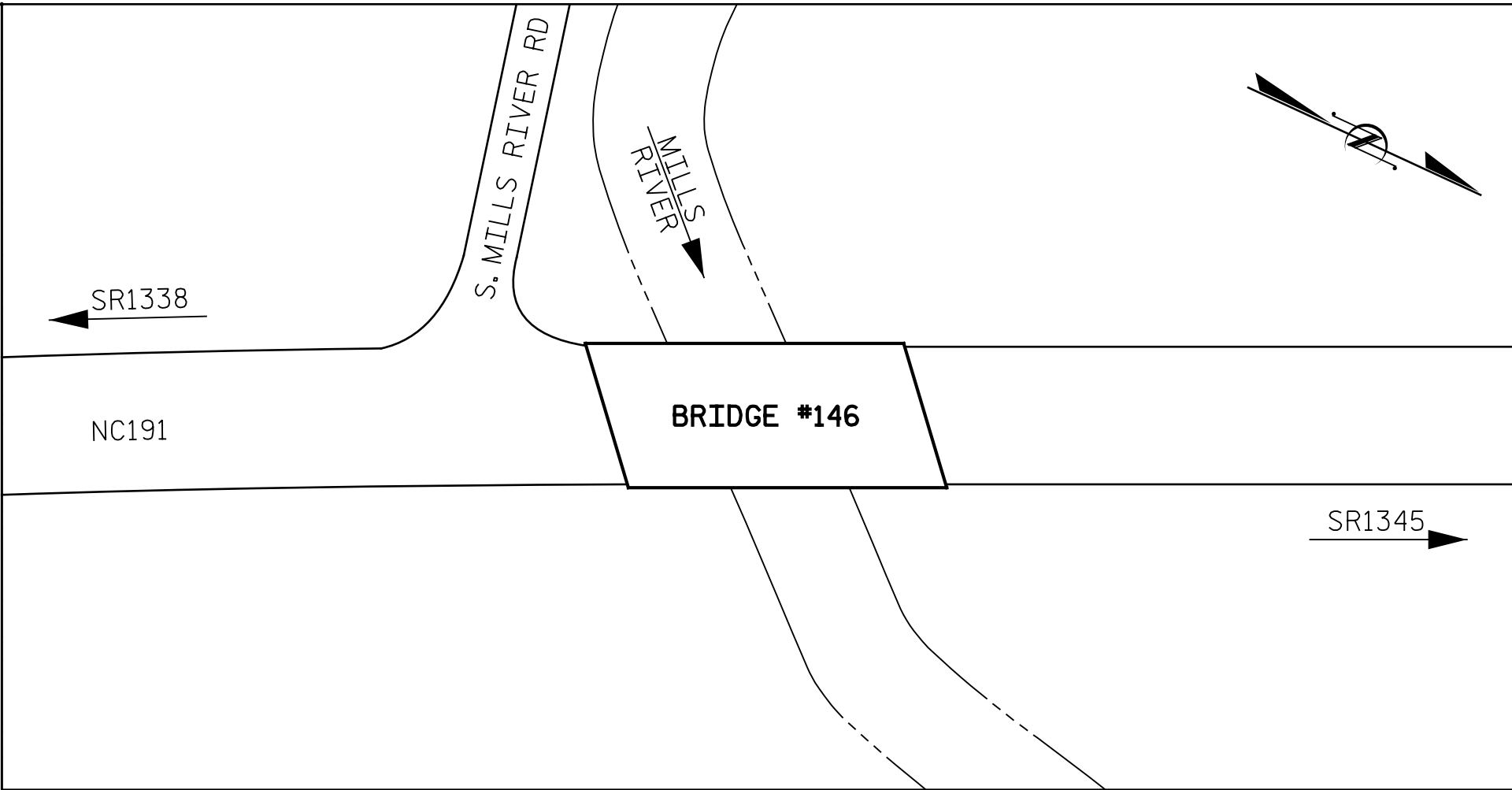
BRIDGE #61



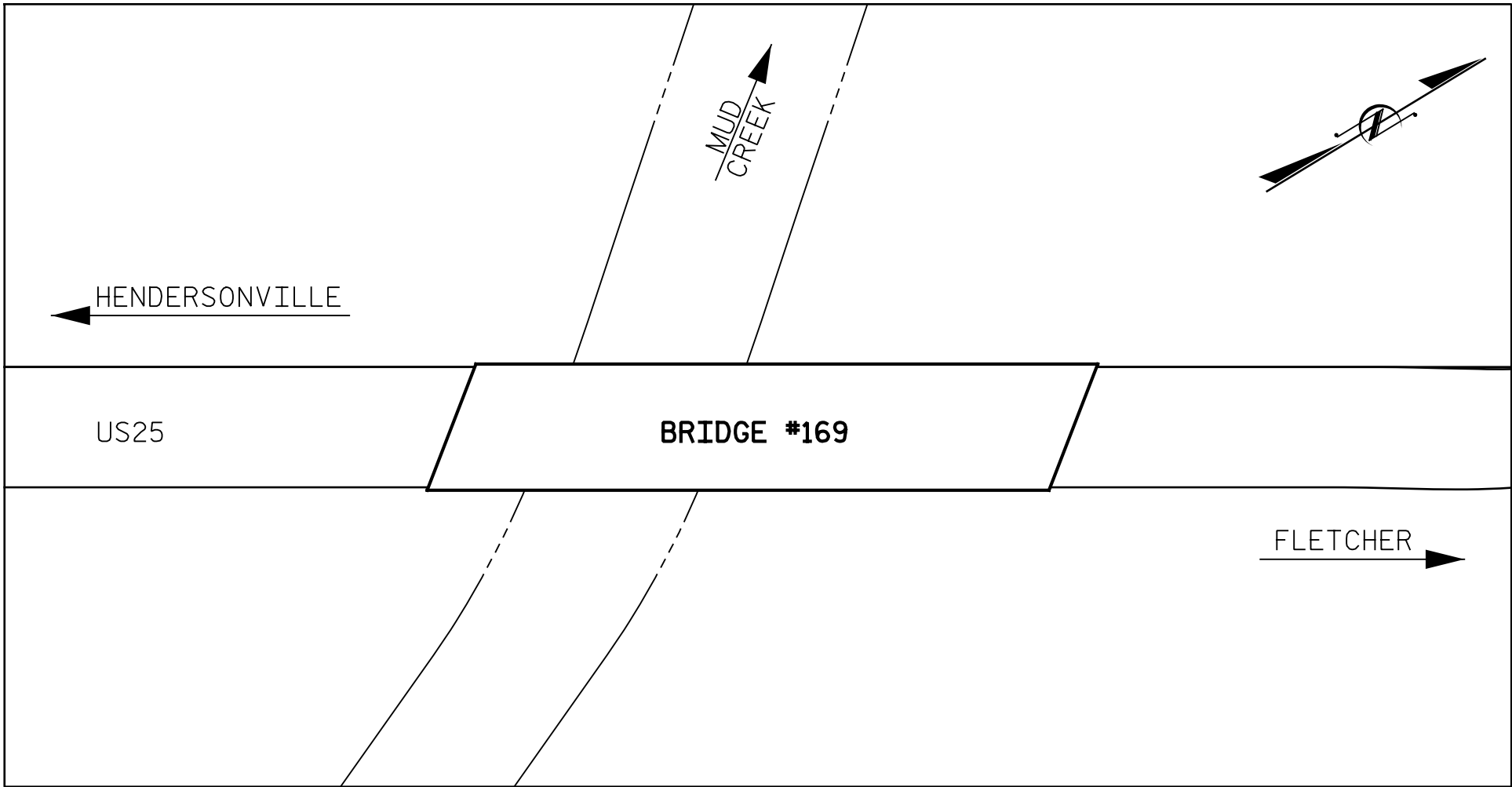
BRIDGE #127 AND #379



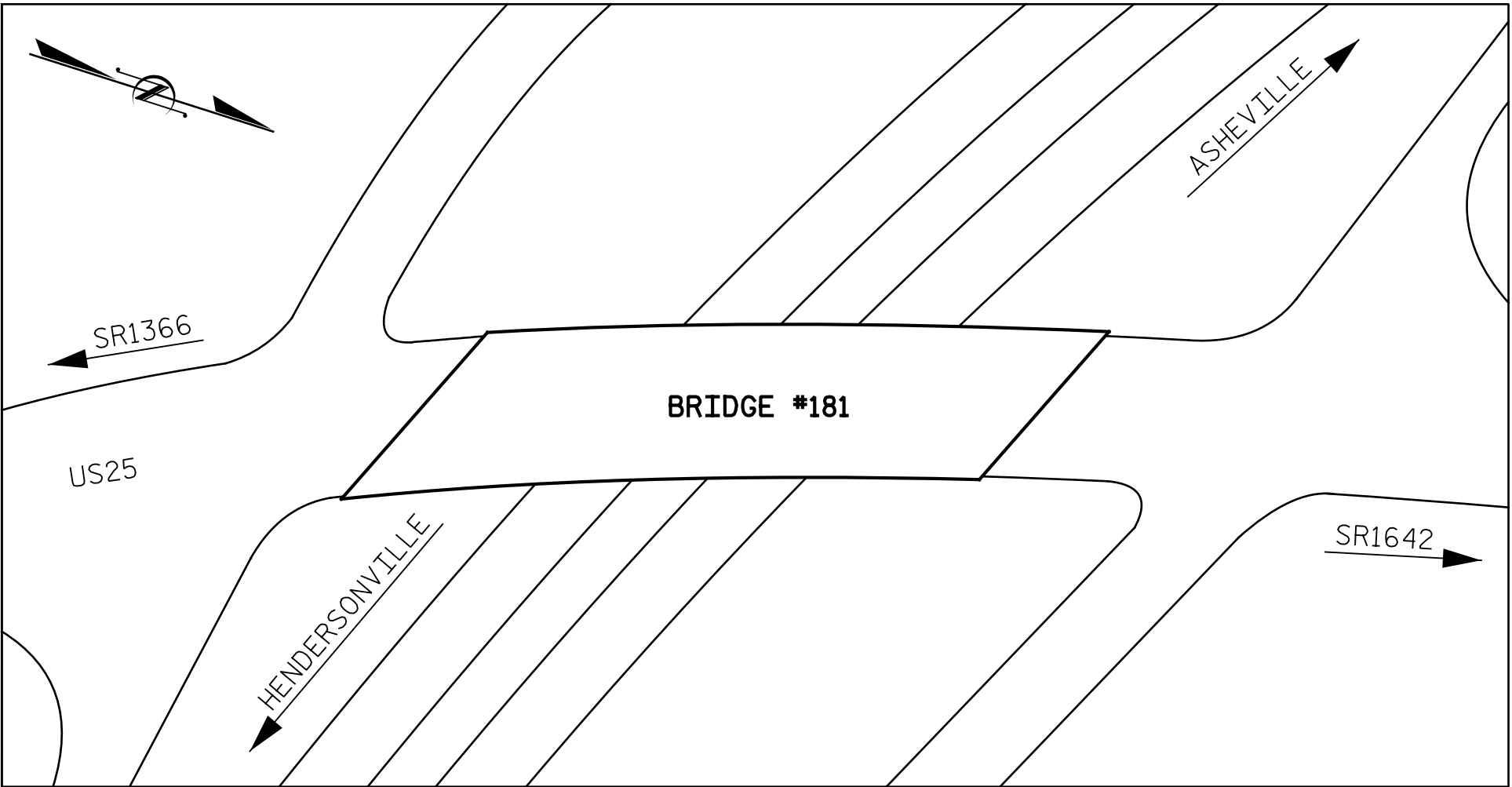
BRIDGE #145



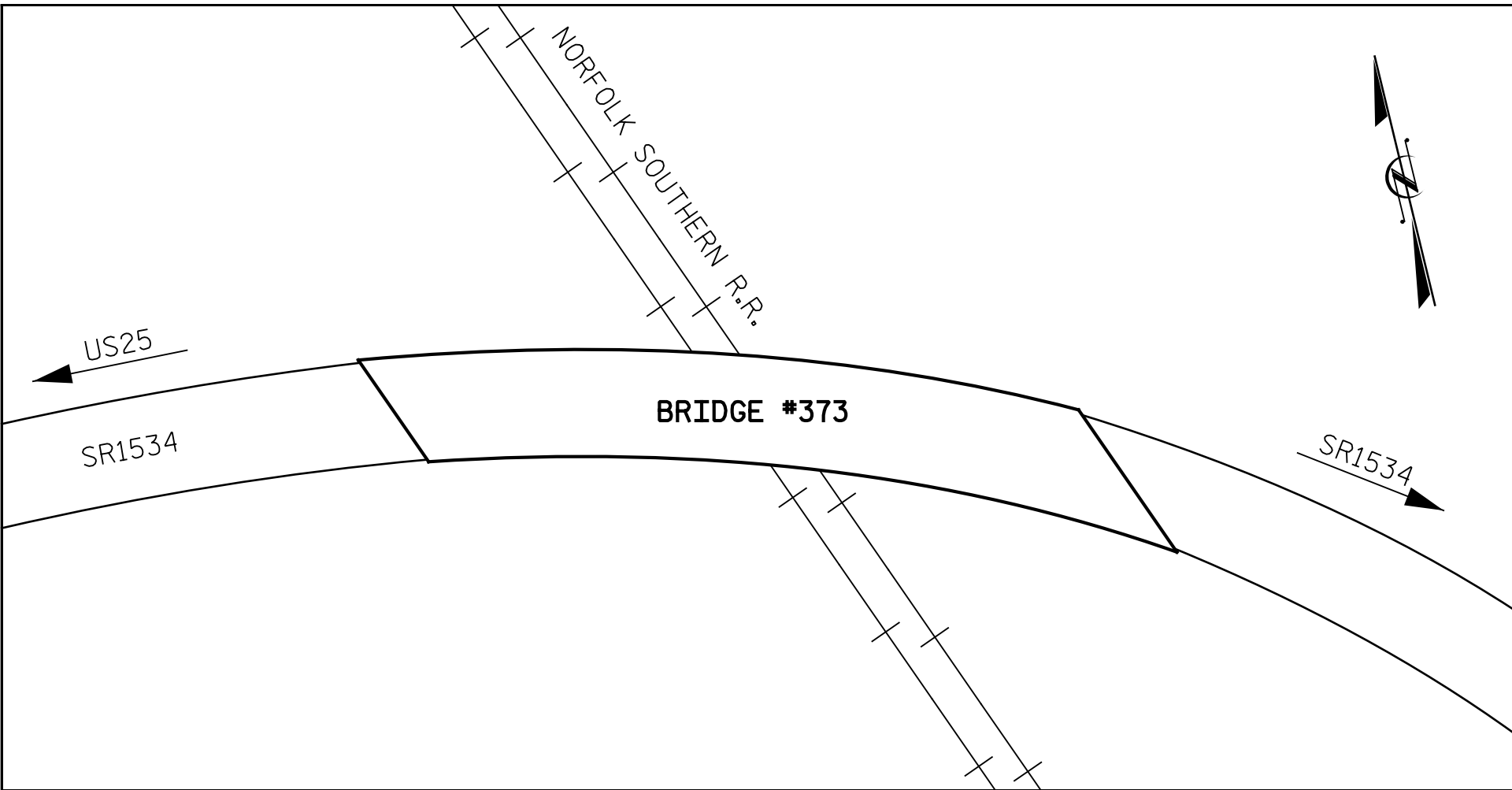
BRIDGE #146



BRIDGE #169



BRIDGE #181



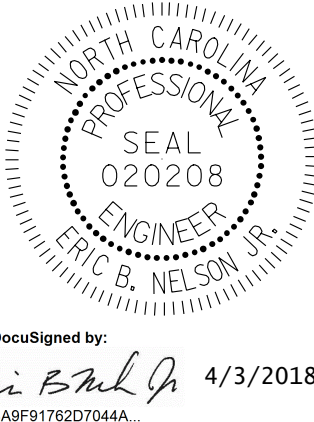
BRIDGE #373

LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

PROJECT NO. 14BPR.3.1
HENDERSON COUNTY

SHEET 2 OF 2



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE LOCATION SKETCHES

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-44	
1			3			TOTAL SHEETS 142	
2			4				

DRAWN BY : M. SPENCER DATE : 1/2018
CHECKED BY : R. WERTMAN DATE : 2/2018

PLANS PREPARED BY:
 Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

NOTES

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

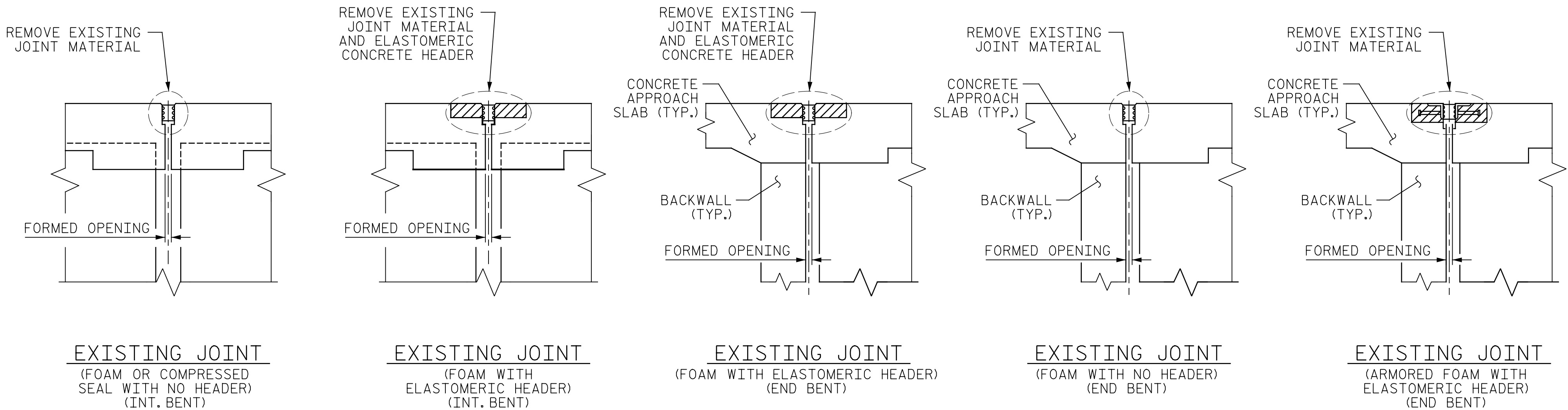
FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

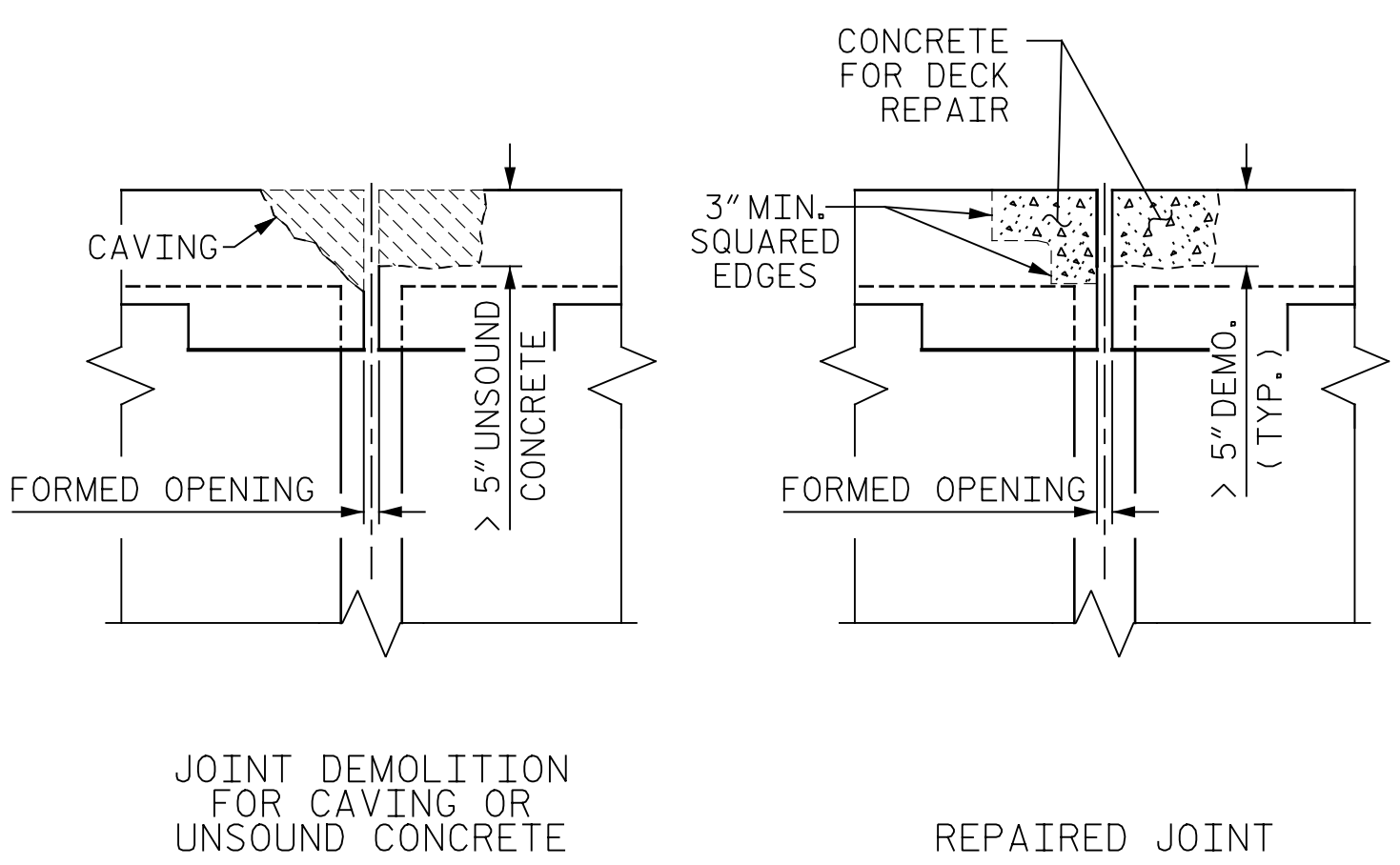
FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT OPENING FOR THE JOINT SEAL IN LIEU OF SAWING.



EXISTING JOINT TYPES



CONCRETE FOR DECK REPAIR DETAIL

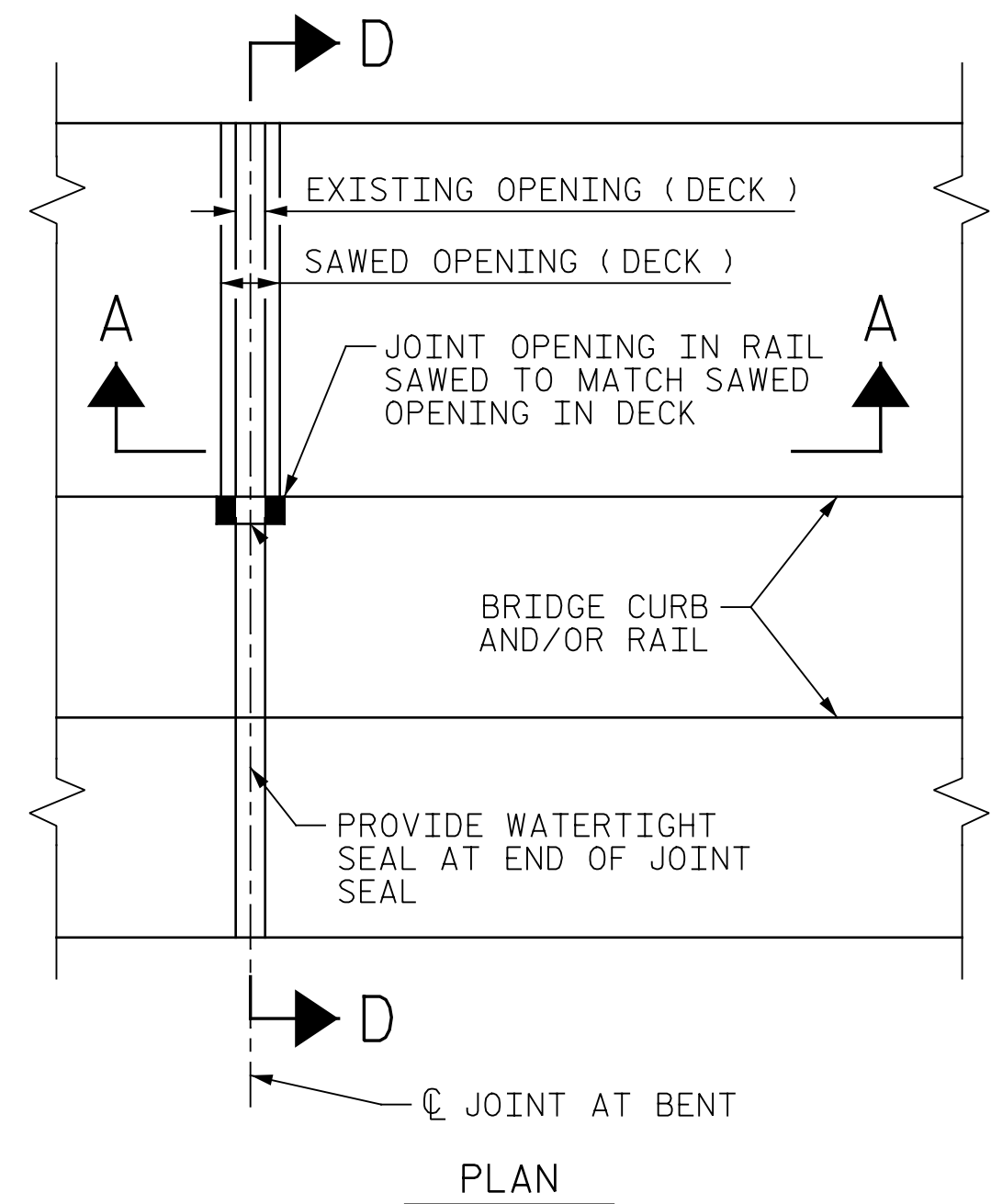
(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

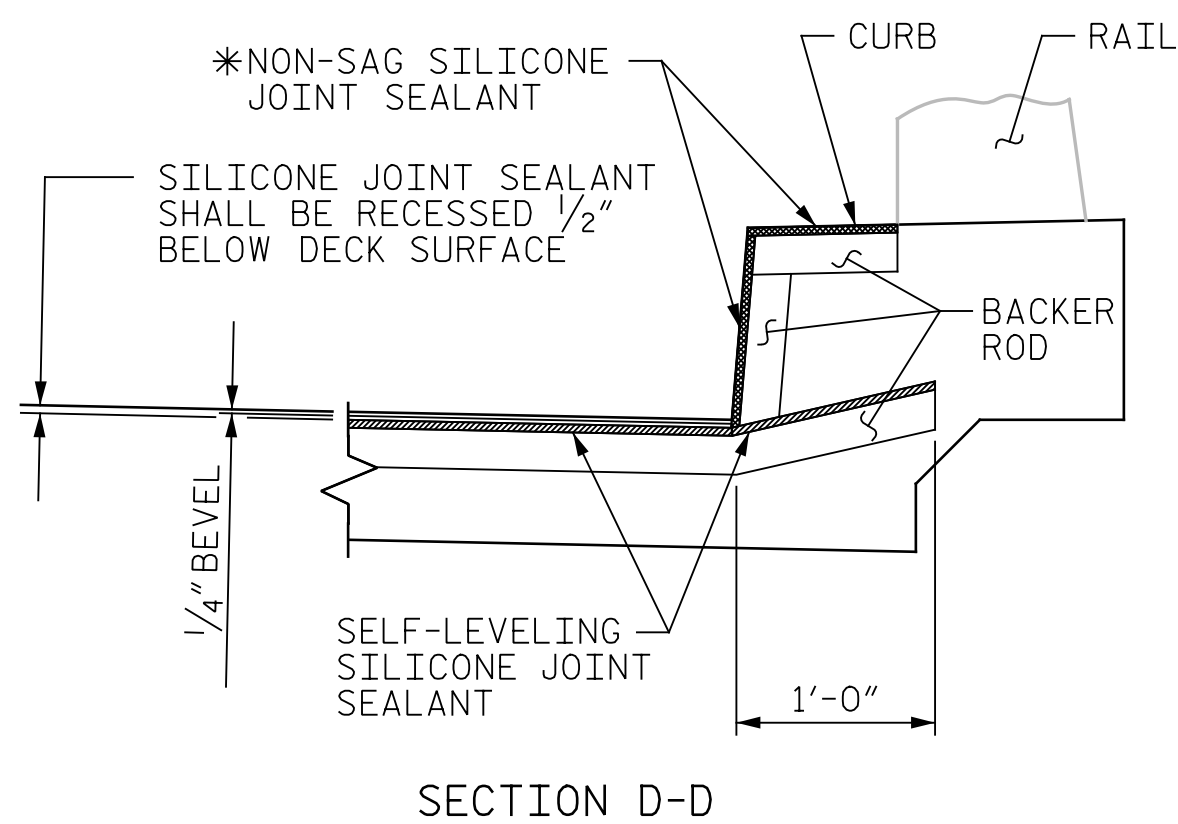
FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

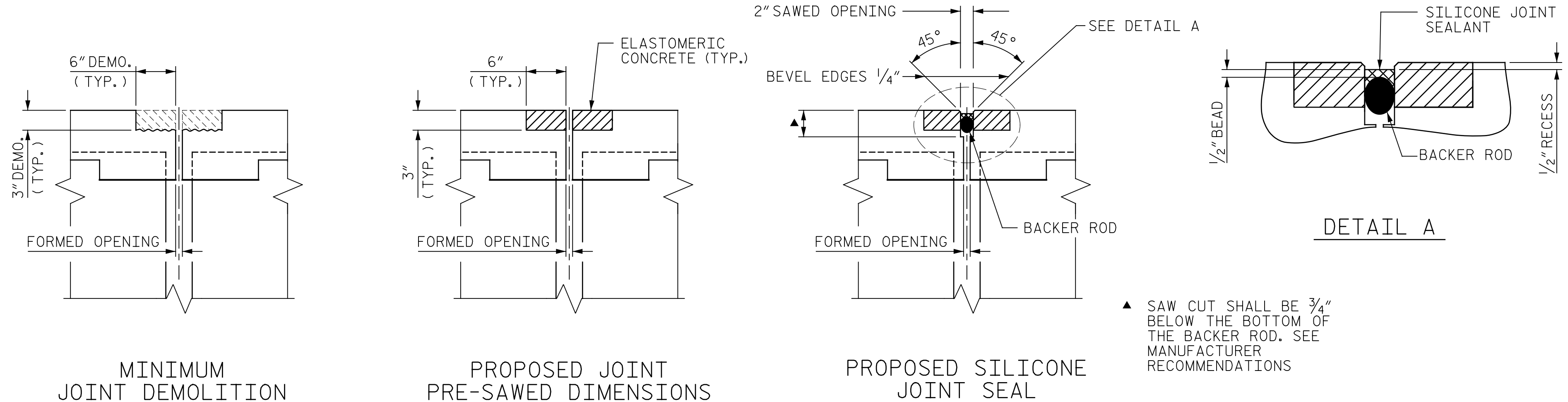
THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.



*SELF LEVELING SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.



JOINT SEAL DETAILS AT BENT



SECTION A-A PROPOSED JOINT

(INTERIOR BENT SHOWN, END BENTS ARE SIMILAR)

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

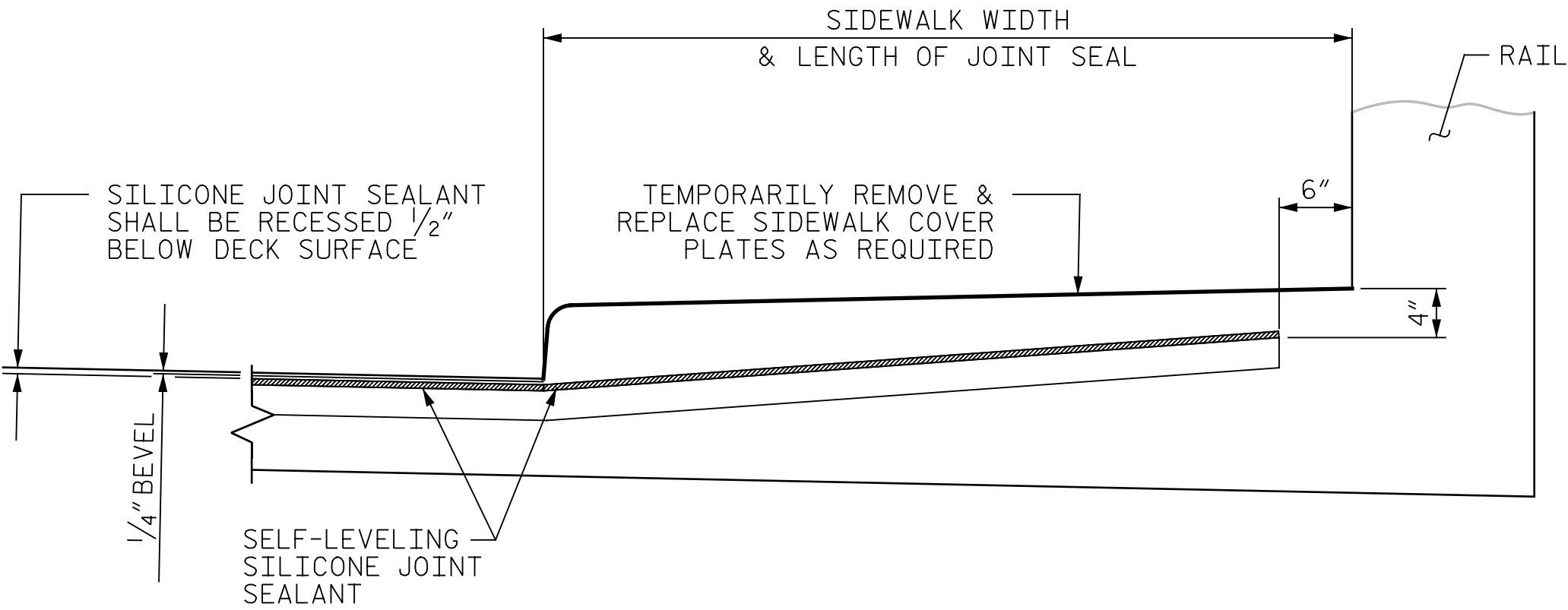
PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DocuSigned by:
Eric B. Nelson Jr.
4/3/2018
BAPF91762D704A...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. 14BPR.3.1
HENDERSON COUNTY
BRIDGE NO. 6, 21, 34, 61, 127, 145, 146, 373, 379

SHEET 1 OF 2					
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
JOINT DETAIL FOR SILICONE JOINT SEAL WITH ELASTOMERIC HEADER					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-45					TOTAL SHEETS 142



JOINT SEAL DETAILS AT SIDEWALK

BRIDGE NO.	SILICONE JOINT SEAL (LF)					ELASTOMERIC CONCRETE (CF) / HEADER DIMENSIONS (WIDTH X DEPTH)										JOINT DEMOLITION (SF)					CONCRETE FOR DECK REPAIR (CF)				
	EB 1	BENT 1	BENT 2	BENT 3	EB 2	EB 1	DIM.	BENT 1	DIM.	BENT 2	DIM.	BENT 3	DIM.	EB 2	DIM.	EB 1	BENT 1	BENT 2	BENT 3	EB 2	EB 1	BENT 1	BENT 2	BENT 3	EB 2
440006	33.0	-	-	-	-	7.5	(2) 6"x3"	-	-	-	-	-	-	-	-	30.0	-	-	-	-	-	-	-	-	-
440021	44.4	44.4	44.4	-	44.4	10.3	(2) 6"x3"	10.3	(2) 6"x3"	10.3	(2) 6"x3"	-	-	10.3	(2) 6"x3"	41.4	41.4	41.4	-	41.4	-	-	-	-	-
440034	46.6	-	-	-	-	10.9	(2) 6"x3"	-	-	-	-	-	-	-	-	43.6	-	-	-	-	-	-	-	-	-
440061	24.6	-	24.6	-	24.6	5.4	(2) 6"x3"	-	-	5.4	(2) 6"x3"	-	-	5.4	(2) 6"x3"	21.6	-	21.6	-	21.6	-	-	-	-	-
440127	55.9	-	-	-	55.9	13.2	(2) 6"x3"	-	-	-	-	-	-	13.2	(2) 6"x3"	52.9	-	-	-	52.9	-	-	-	-	-
440145	59.0	-	-	-	-	12.0	(2) 6"x3"	-	-	-	-	-	-	-	-	48.1	-	-	-	-	-	-	-	-	-
440146	88.1	88.1	88.1	-	88.1	21.3	(2) 6"x3"	21.3	(2) 6"x3"	21.3	(2) 6"x3"	-	-	21.3	(2) 6"x3"	85.1	85.1	85.1	-	85.1	-	-	-	-	-
440373	47.1	-	-	-	47.1	11.3	(2) 6"x3"	-	-	-	-	-	-	11.3	(2) 6"x3"	45.1	-	-	-	45.1	-	-	-	-	-
440379	55.0	-	-	-	55.0	13.0	(2) 6"x3"	-	-	-	-	-	-	13.0	(2) 6"x3"	52.0	-	-	-	52.0	-	-	-	-	-

PROJECT NO. 14BPR.3.1
HENDERSON COUNTY
BRIDGE NO. 6, 21, 34, 61,
127, 145, 146,
373, 379

SHEET 2 OF 2



DocuSigned by:
Eric B. Nelson
4/3/2018

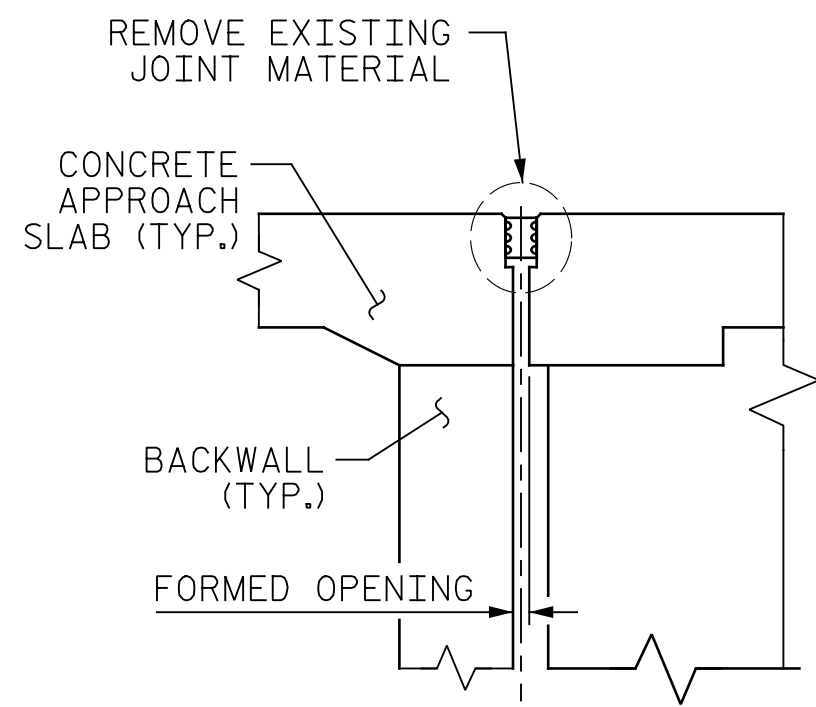
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
JOINT TABLE FOR SILICONE JOINT SEAL WITH ELASTOMERIC HEADER					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
TOTAL SHEETS					142

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

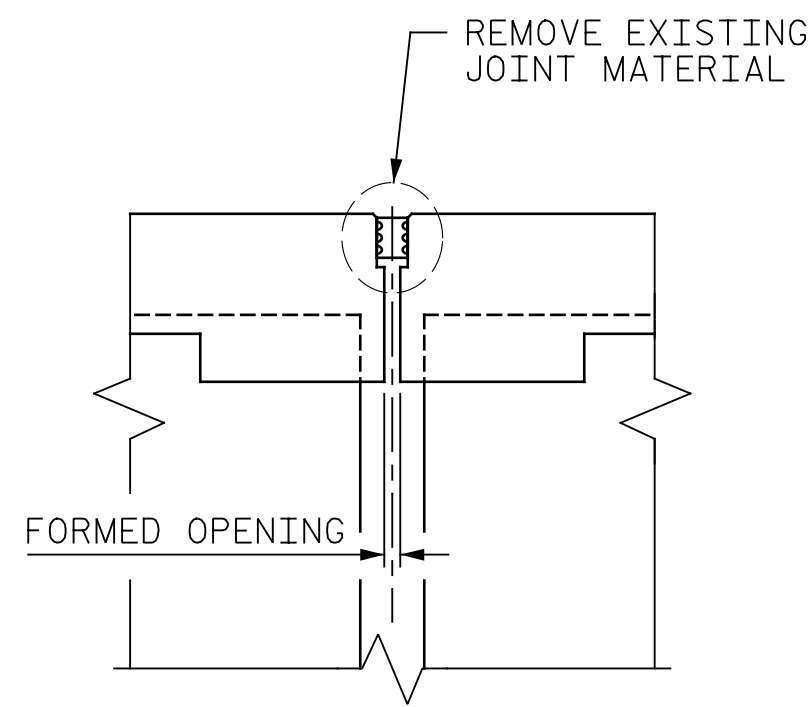
PLANS PREPARED BY:

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

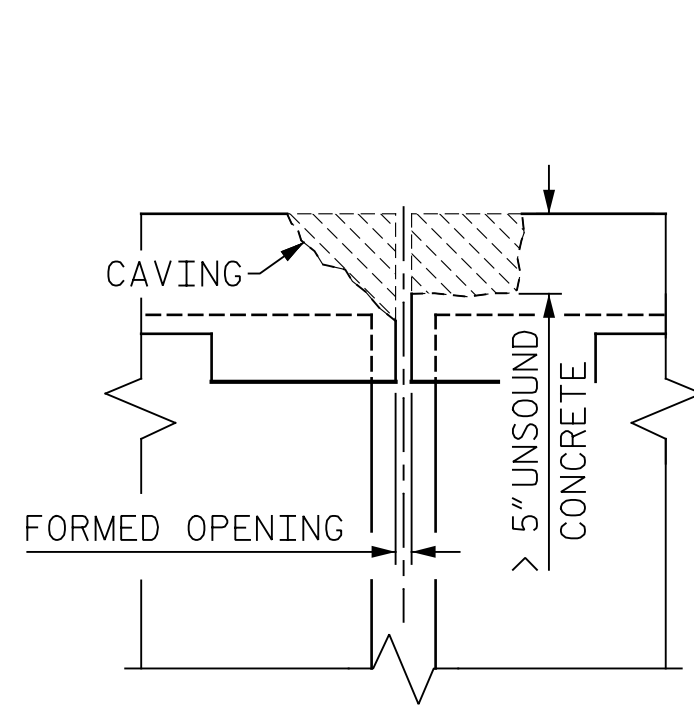


EXISTING JOINT
(FOAM WITH NO HEADER)
(END BENT)

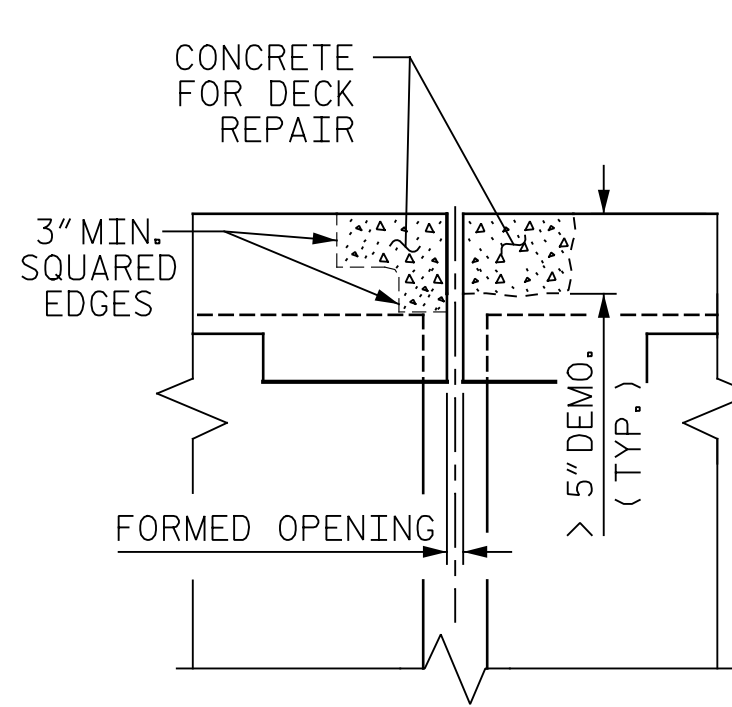


EXISTING JOINT
(FOAM OR COMPRESSED SEAL
WITH NO HEADER) (INT. BENT)

EXISTING JOINT TYPES



JOINT DEMOLITION
FOR CAVING OR
UNFOUND CONCRETE



REPAIRED JOINT

CONCRETE FOR DECK REPAIR DETAIL

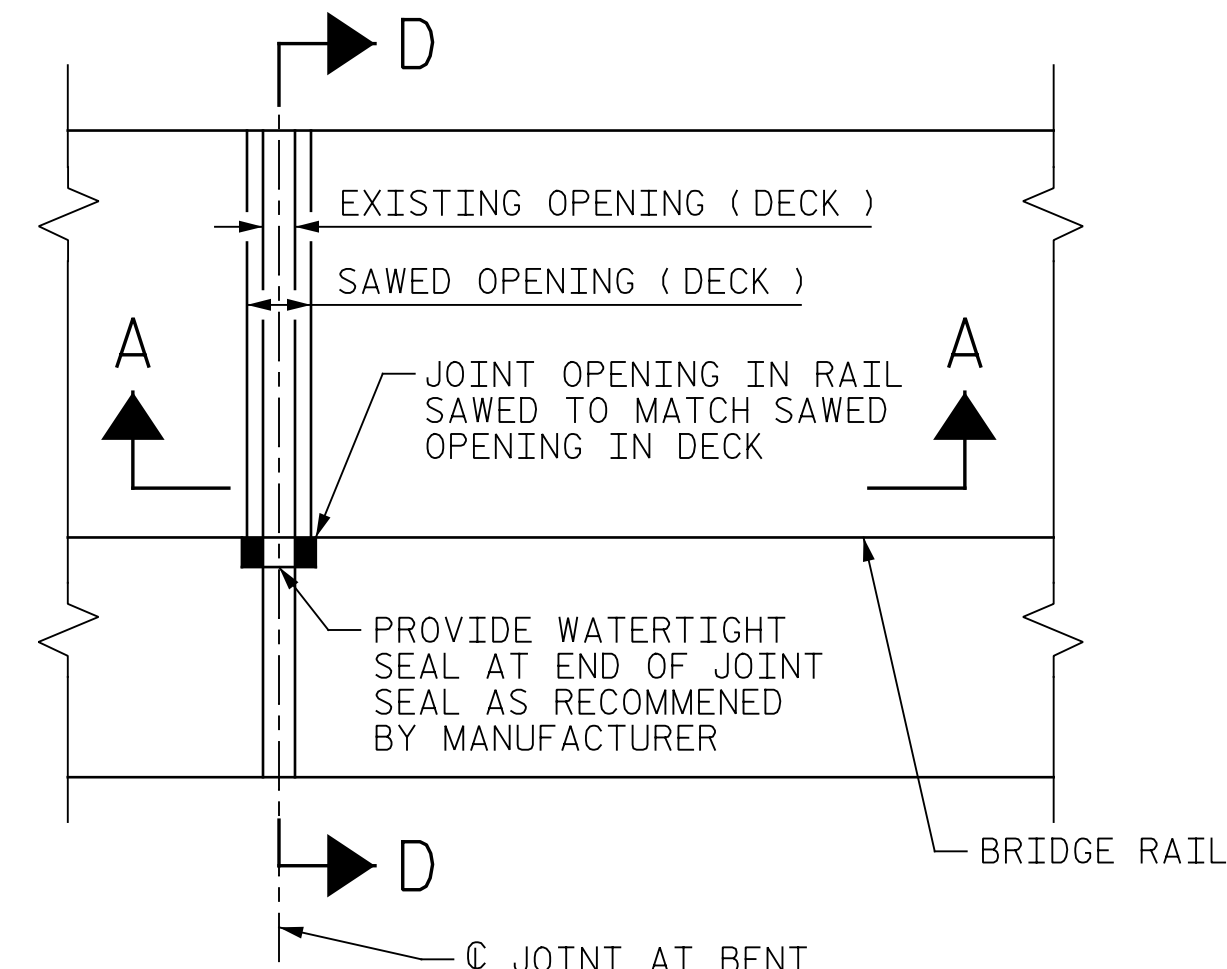
(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

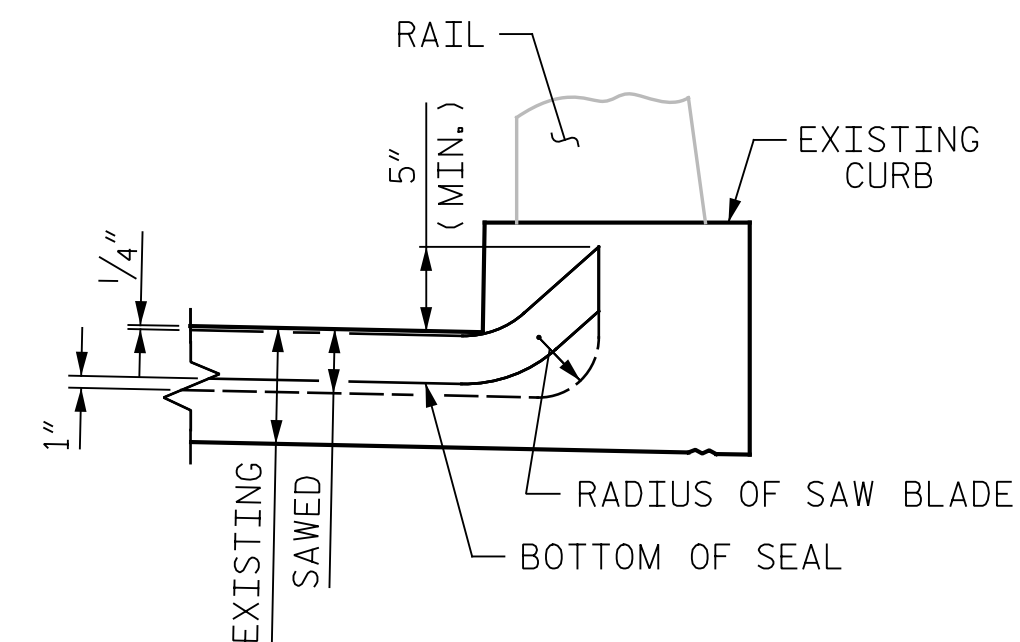
FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.



PLAN



SECTION D-D

NOTES

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS, SEE SPECIAL PROVISIONS.

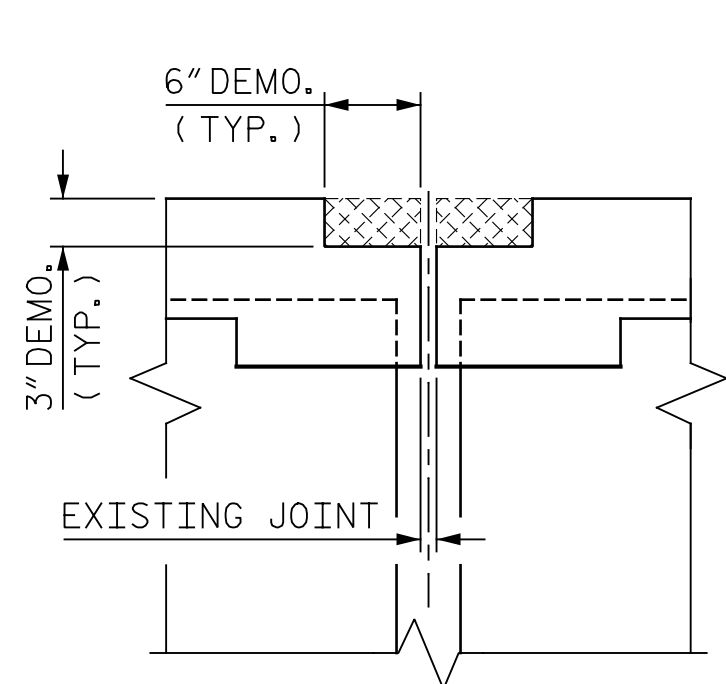
THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT OPENING FOR THE JOINT SEAL IN LIEU OF SAWING.

THE NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE:

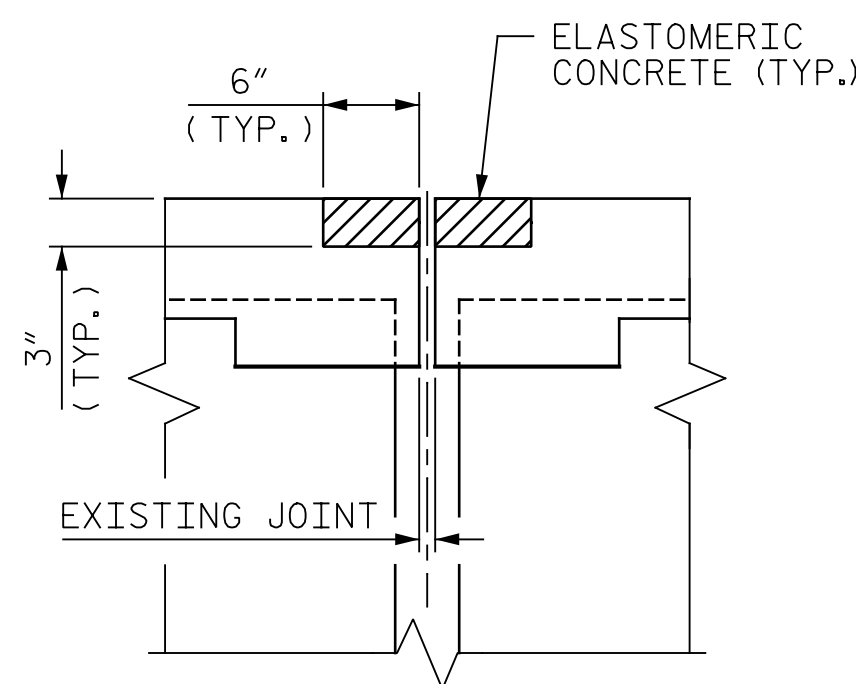
BRIDGE 440006 END BENT 2 IS 2".

BRIDGE 440061 BENT 1 IS 2".

BRIDGE 440145 END BENT 2 IS 2".



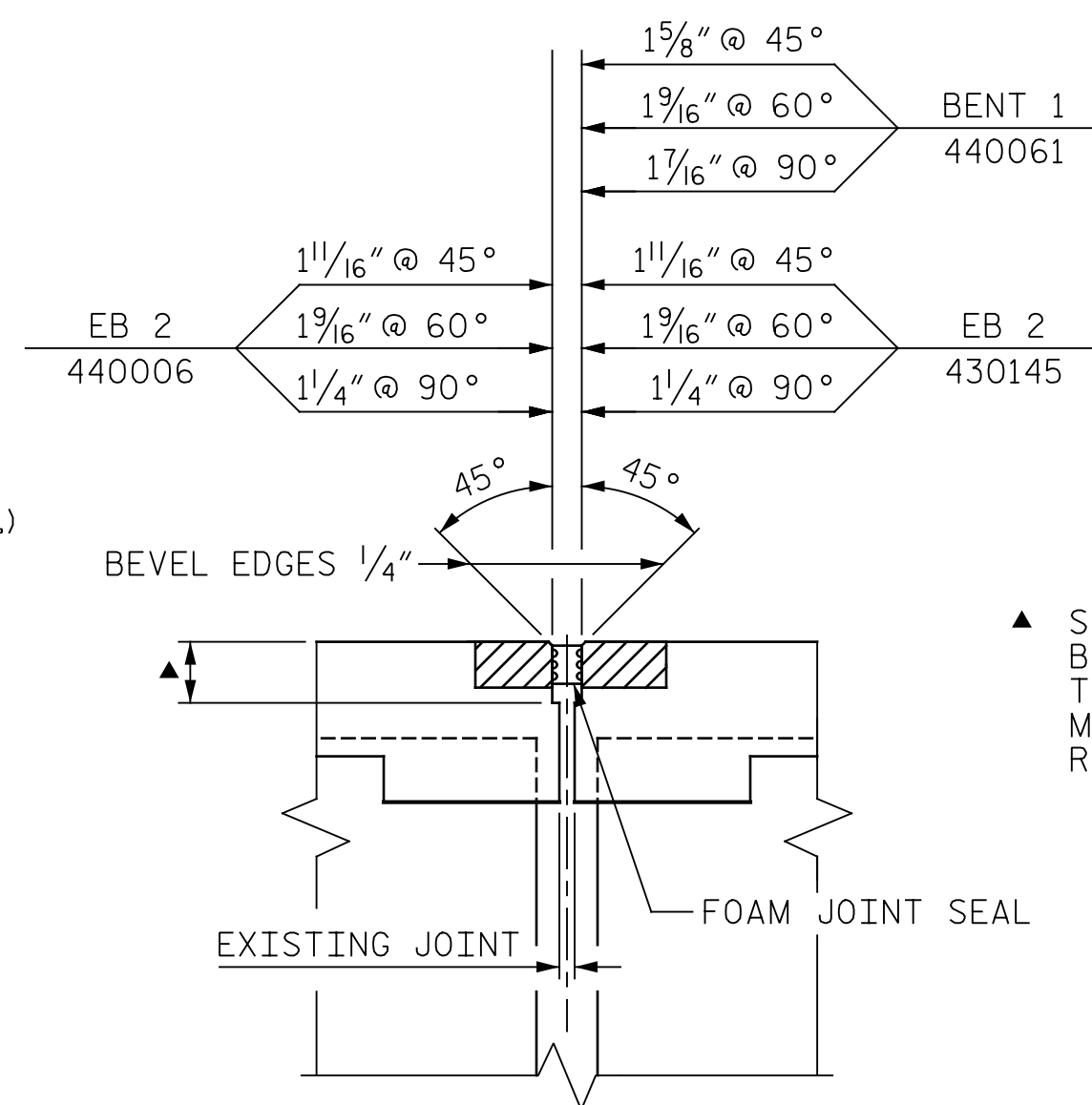
MINIMUM EXISTING
JOINT DEMOLITION



PROPOSED JOINT
PRE-SAWED DIMENSIONS

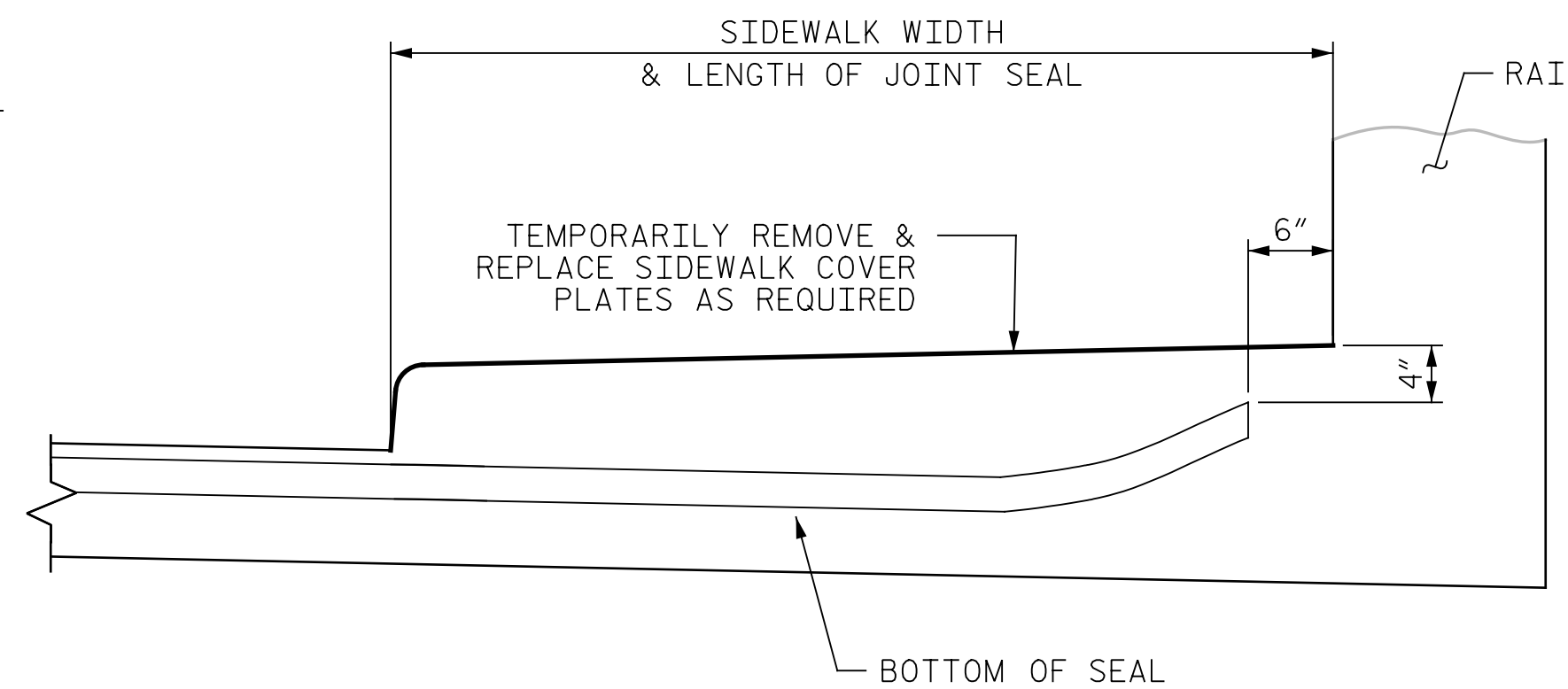
SECTION A-A PROPOSED JOINT

(INTERIOR BENT SHOWN,
END BENTS ARE SIMILIAR)



PROPOSED FOAM
JOINT SEAL

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL. SEE MANUFACTURER RECOMMENDATIONS



JOINT SEAL DETAILS AT SIDEWALK

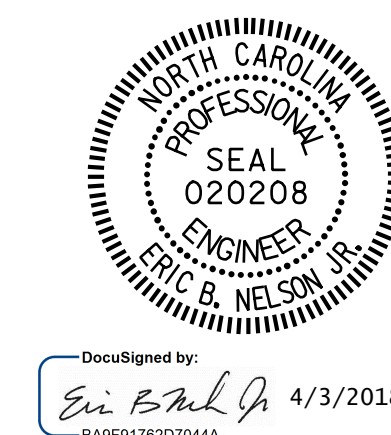
JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
HENDERSON COUNTY
BRIDGE NO. 145

	FOAM JOINT SEAL (LF)					ELASTOMERIC CONCRETE (CF) / HEADER DIMENSIONS (WIDTH X DEPTH)										JOINT DEMOLITION (SF)					CONCRETE FOR DECK REPAIR (CF)				
BRIDGE NO.	EB 1	BENT 1	BENT 2	BENT 3	EB 2	EB 1	DIM.	BENT 1	DIM.	BENT 2	DIM.	BENT 3	DIM.	EB 2	DIM.	EB 1	BENT 1	BENT 2	BENT 3	EB 2	EB 1	BENT 1	BENT 2	BENT 3	EB 2
440006	-	-	-	-	32.0	-	-	-	-	-	-	-	-	7.5	(2) 6"x3"	-	-	-	-	30.0	-	-	-	-	-
440061	-	23.6	-	-	-	-	-	5.4	(2) 6"x3"	-	-	-	-	-	-	-	21.6	-	-	-	-	-	-	-	-
440145	-	-	-	-	59.0	-	-	-	-	-	-	-	-	12.0	(2) 6"x3"	-	-	-	-	48.1	-	-	-	-	-

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

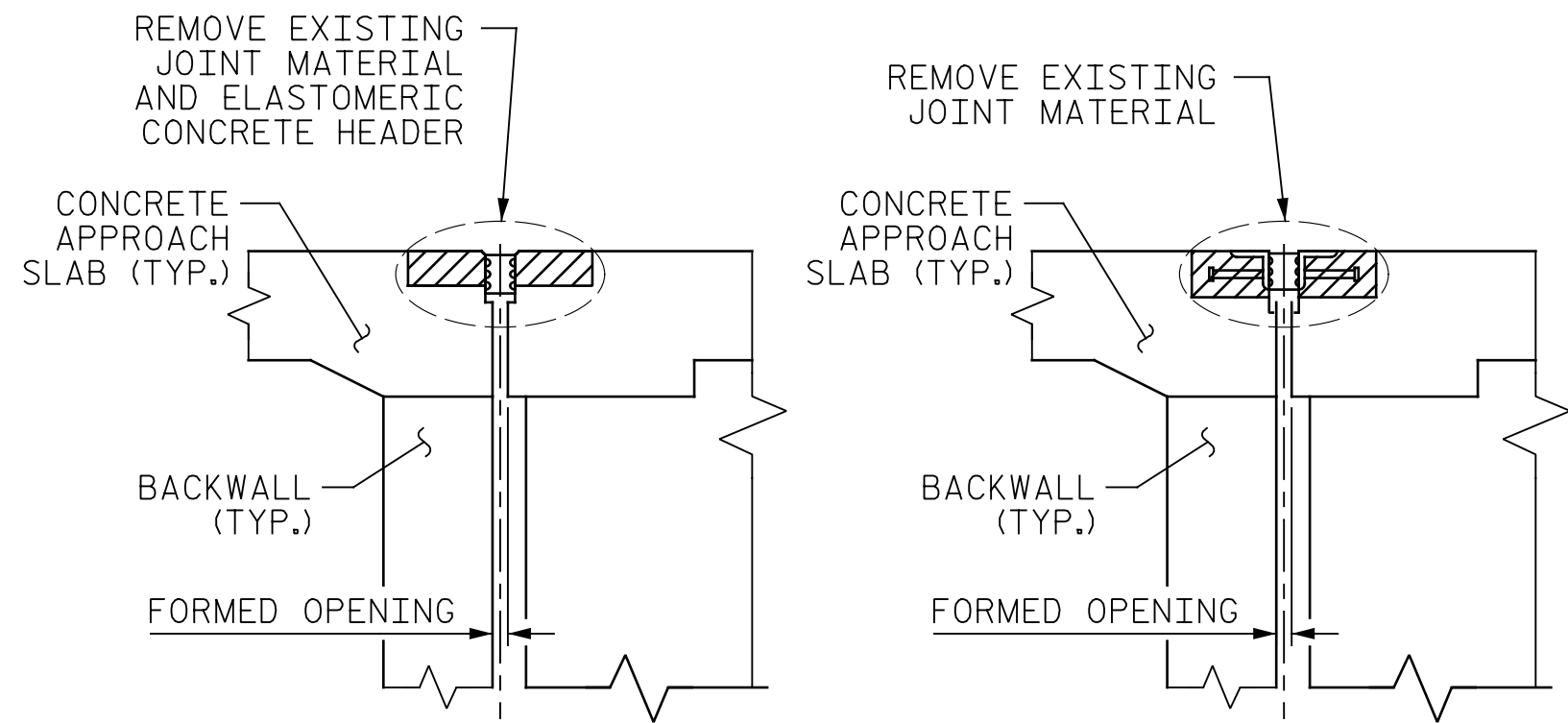
PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270



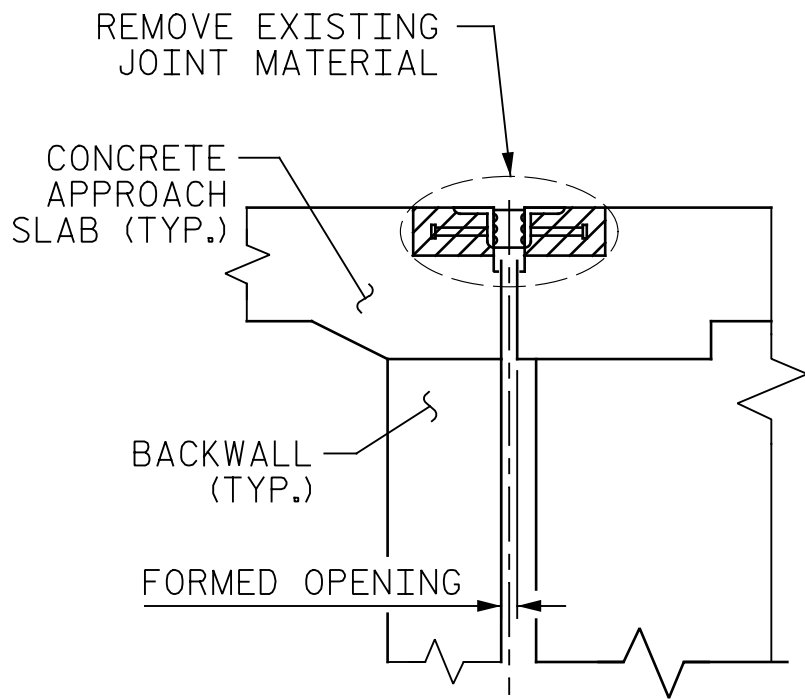
DocuSigned by:
Eric B. Nelson
4/3/2018

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						
JOINT DETAIL FOR FOAM JOINT SEAL WITH ELASTOMERIC HEADER						
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-47
1			3			TOTAL SHEETS
2			4			142

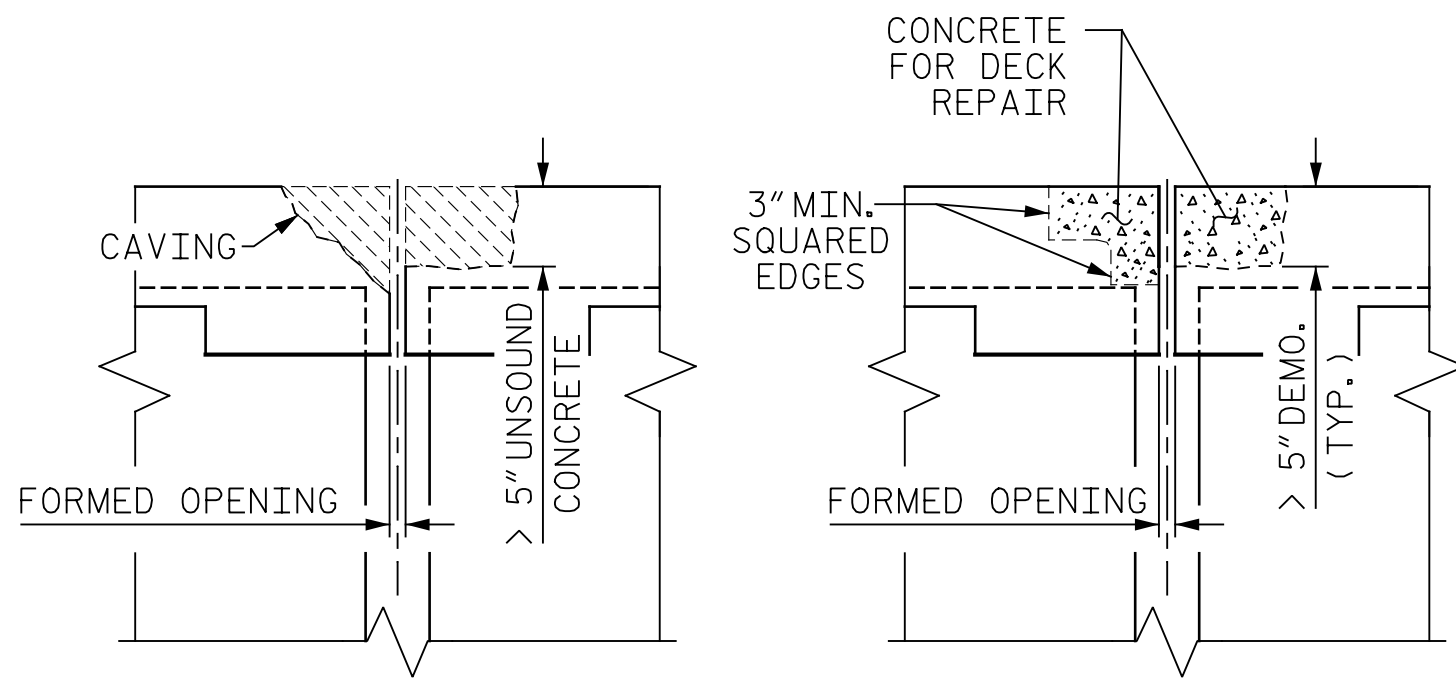


EXISTING JOINT
(FOAM WITH NO HEADER)
(END BENT)

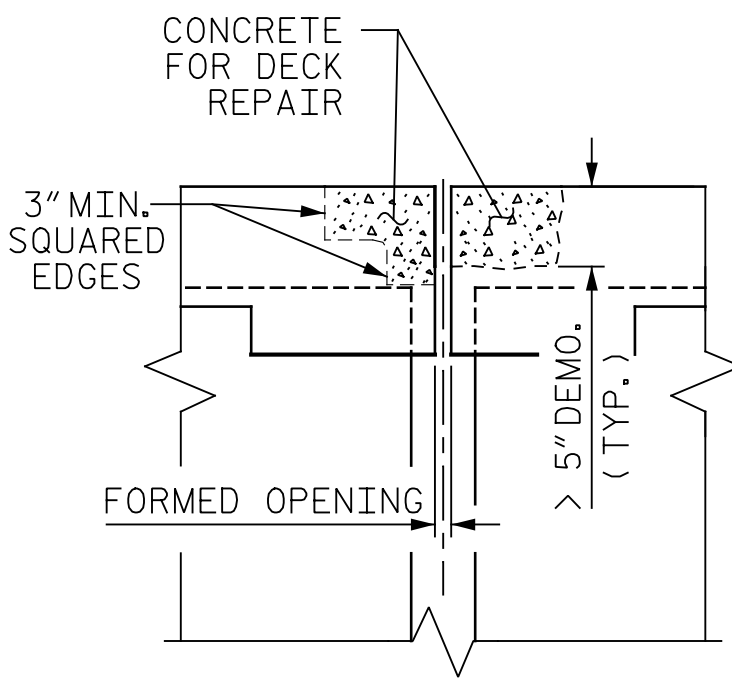


EXISTING JOINT
(ARMORED FOAM WITH
ELASTOMERIC HEADER)
(END BENT)

EXISTING JOINT TYPES



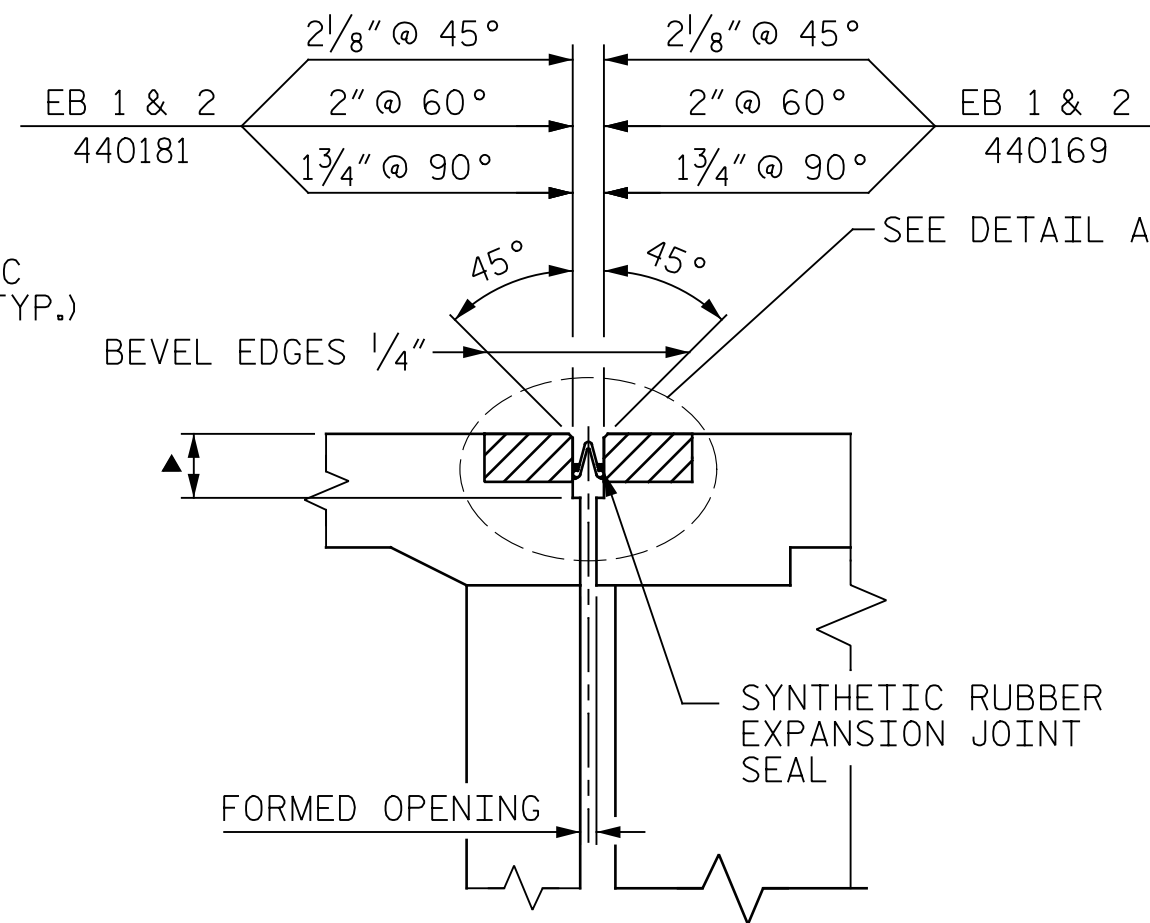
JOINT DEMOLITION
FOR CAVING OR
UN SOUND CONCRETE



REPAIRED JOINT

CONCRETE FOR DECK REPAIR DETAIL

(FOR REPAIR OF JOINTS WITH DEEP EXCAVATION OR SLOPING EDGES)



PROPOSED SILICONE
JOINT SEAL

NOTE: RETAIN ALL EXISTING REINFORCING STEEL. BARS CUT OR DAMAGED DURING DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT PRIOR TO PLACING REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

FOR BRIDGE JOINT DEMOLITION EXCAVATE TO SOUND CONCRETE. IF BRIDGE JOINT DEMOLITION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER OR IF CAVING OF CONCRETE OCCURS SUCH THAT A LEVEL SURFACE CANNOT BE ACHIEVED, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE SURFACE OF THE DECK

DO NOT INSTALL ELASTOMERIC CONCRETE HEADER UNTIL THE REPAIR CONCRETE HAS ACHIEVED DESIGN STRENGTH AND IS FULLY CURED (REFER TO MANUFACTURER SPECIFICATIONS FOR STRENGTH AND CURE).

THE CONTRACTOR SHALL HAVE ON HAND REPAIR CONCRETE AND MIXING EQUIPMENT PRIOR TO BEGINNING BRIDGE JOINT DEMOLITION.

NOTES

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

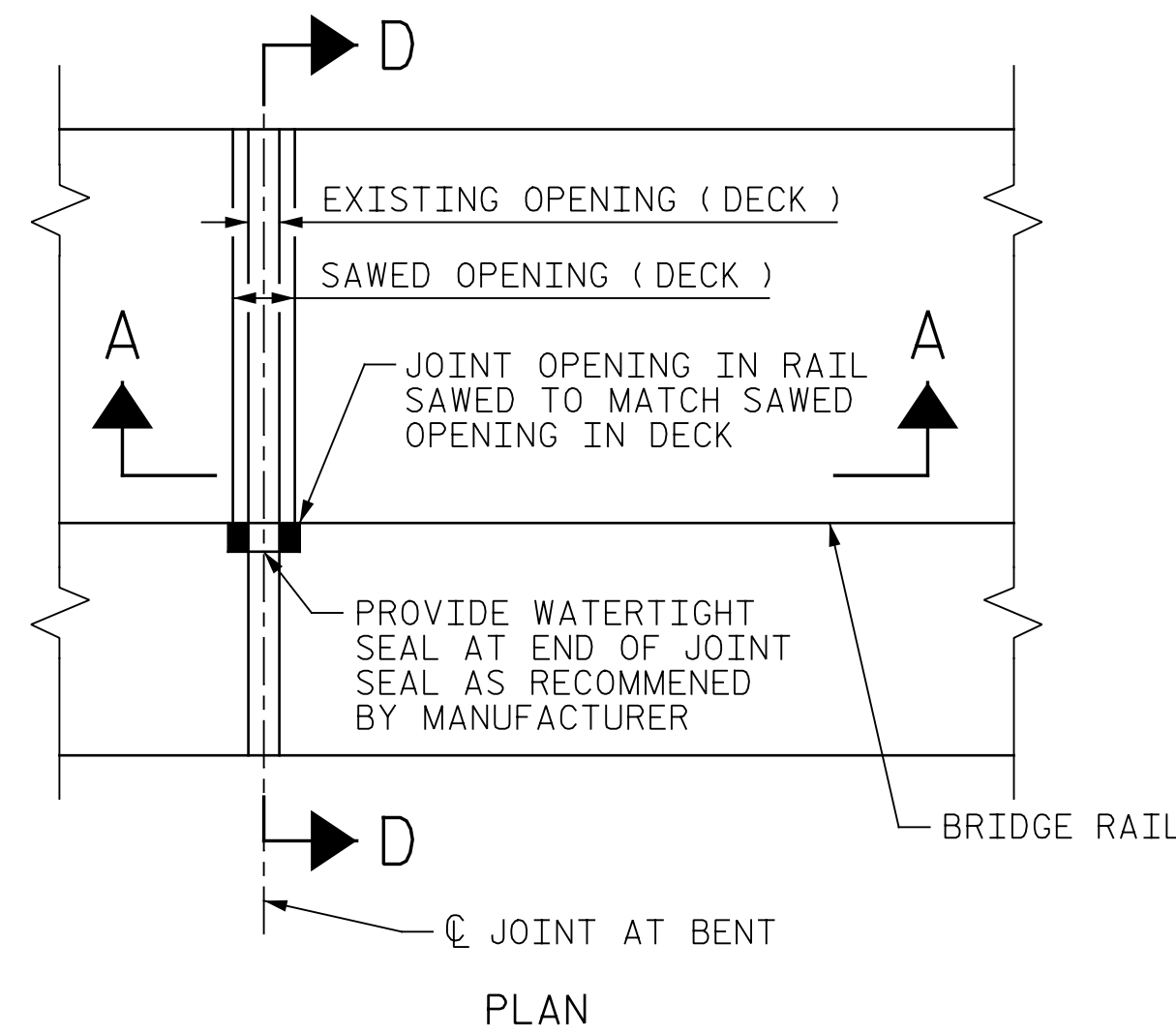
FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

FOR SYNTHETIC RUBBER EXPANSION JOINT SEAL.

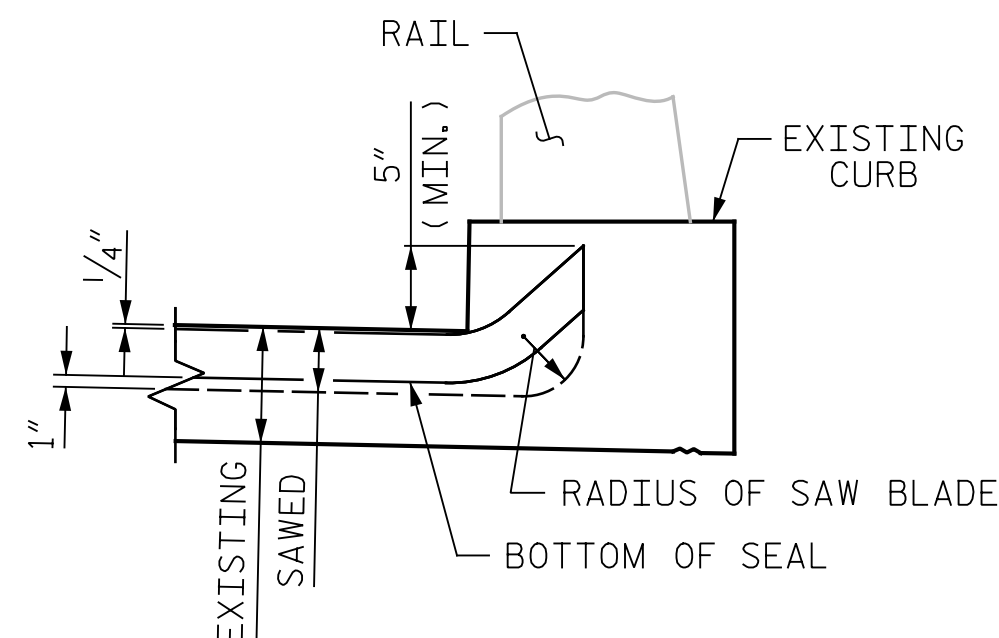
THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINT OPENING FOR THE JOINT SEAL IN LIEU OF SAWING.

FOR 440169, PROVIDE JOINT SEALS AT END BENT 1 AND END BENT 2 WITH A MOVEMENT RATING OF 2 1/4".

FOR 440181, PROVIDE JOINT SEALS AT END BENT 1 AND END BENT 2 WITH A MOVEMENT RATING OF 2 1/4".

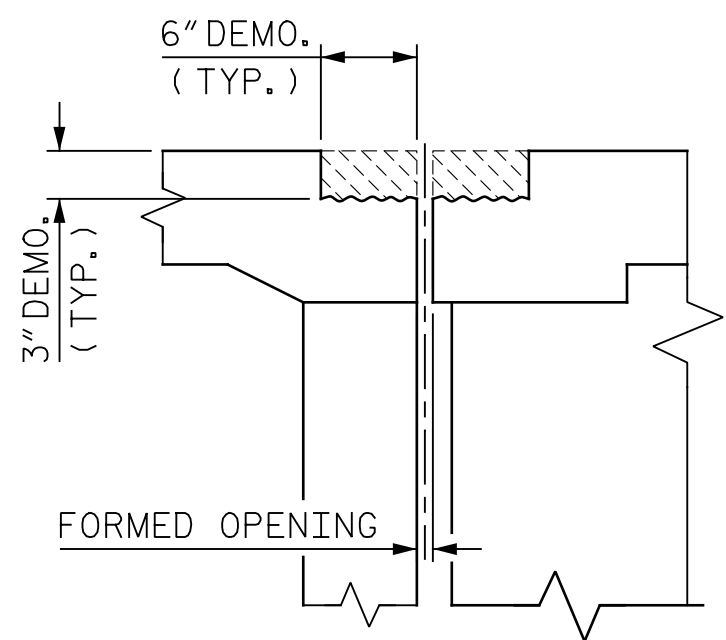


PLAN

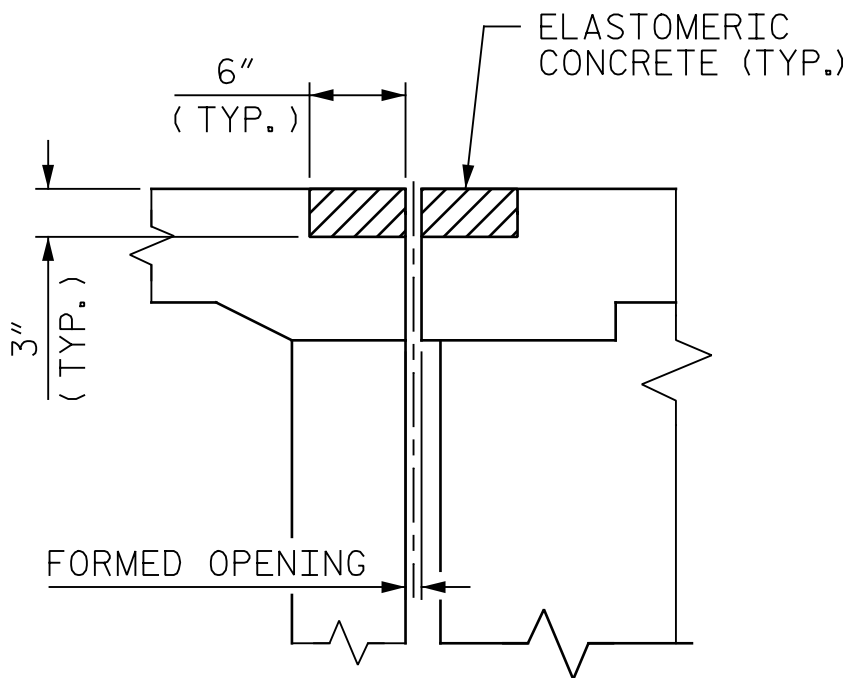


SECTION D-D

JOINT SEAL DETAILS AT BENT

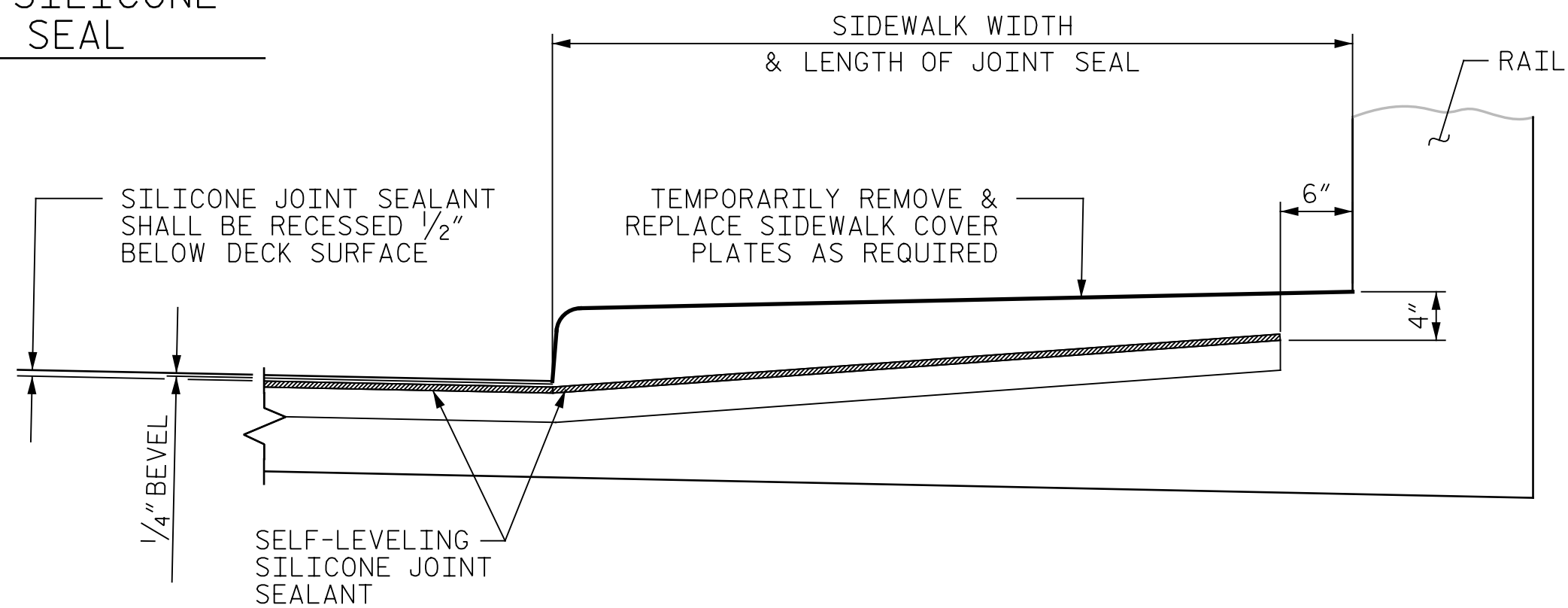


MINIMUM
JOINT DEMOLITION



PROPOSED JOINT
PRE-SAWED DIMENSIONS

SECTION A-A PROPOSED JOINT



JOINT SEAL DETAILS AT SIDEWALK

	SYNTHETIC JOINT SEAL (LF)					ELASTOMERIC CONCRETE (CF) / HEADER DIMENSIONS (WIDTH X DEPTH)										JOINT DEMOLITION (SF)					CONCRETE FOR DECK REPAIR (CF)				
BRIDGE NO.	EB 1	BENT 1	BENT 2	BENT 3	EB 2	EB 1	DIM.	BENT 1	DIM.	BENT 2	DIM.	BENT 3	DIM.	EB 2	DIM.	EB 1	BENT 1	BENT 2	BENT 3	EB 2	EB 1	BENT 1	BENT 2	BENT 3	EB 2
440169	78.7	-	-	-	78.7	17.1	(2) 6"x3"	-	-	-	-	-	-	17.1	(2) 6"x3"	68.4	-	-	-	68.4	-	-	-	-	-
440181	127.3	-	-	-	127.3	28.3	(2) 6"x3"	-	-	-	-	-	-	28.3	(2) 6"x3"	113.2	-	-	-	113.2	-	-	-	-	-

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered As Promised
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270



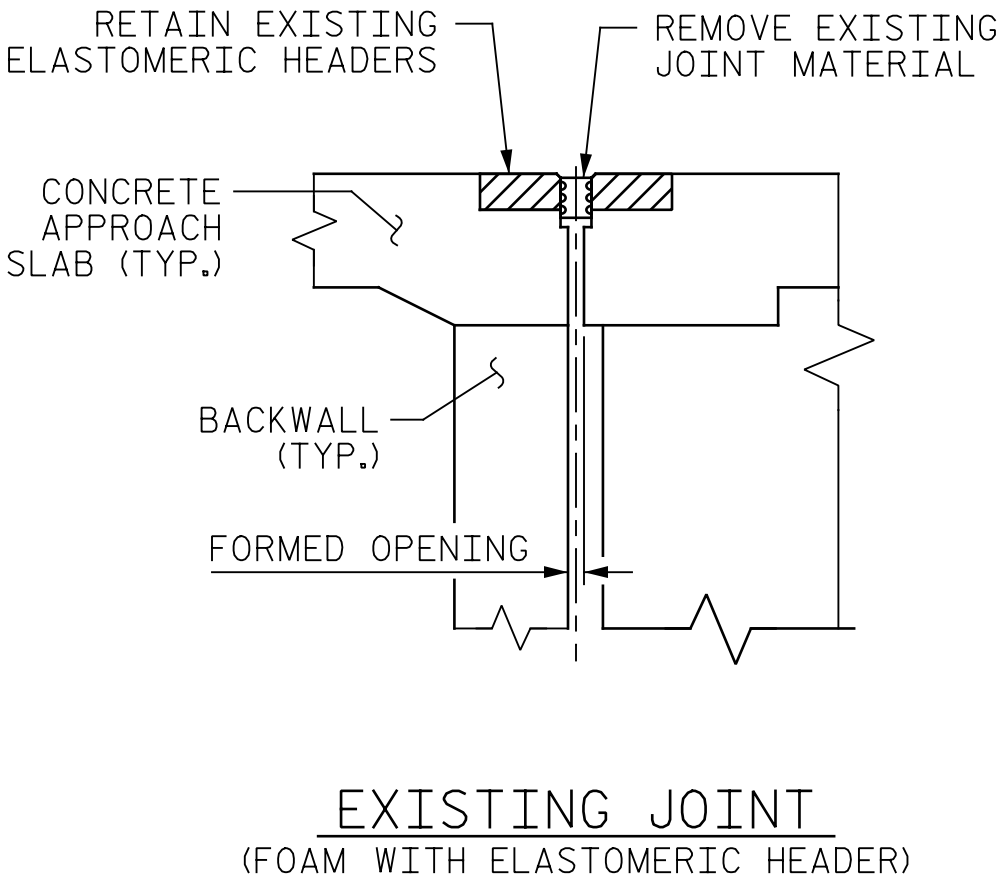
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH											
JOINT DETAIL FOR SYNTHETIC RUBBER JOINT SEAL WITH ELASTOMERIC HEADER											
REVISIONS										SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-48					
1			3			TOTAL SHEETS					
2			4			142					

PROJECT NO. 14BPR.3.1
HENDERSON COUNTY
BRIDGE NO. 169, 181

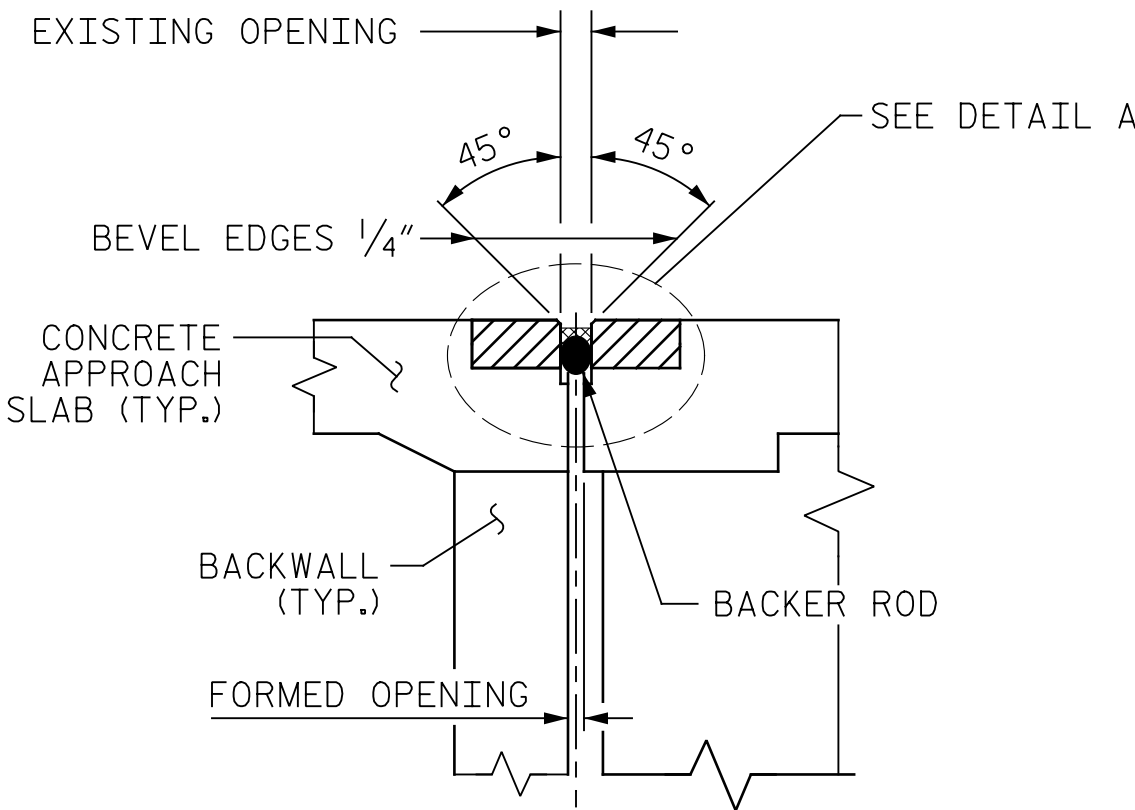
NOTES

FOR SILICONE JOINT SEALS, SEE SPECIAL PROVISIONS.



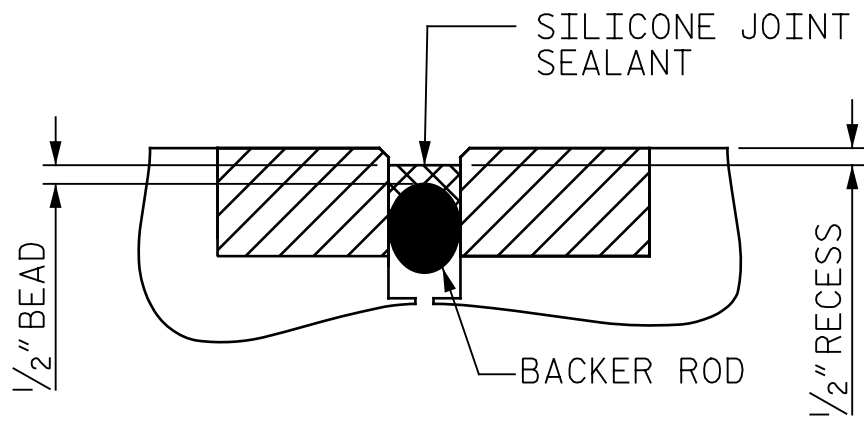
EXISTING JOINT TYPES

	SILICONE JOINT SEAL (LF)				
BRIDGE NO.	EB 1	BENT 1	BENT 2	BENT 3	EB 2
440034	-	-	-	-	46.6

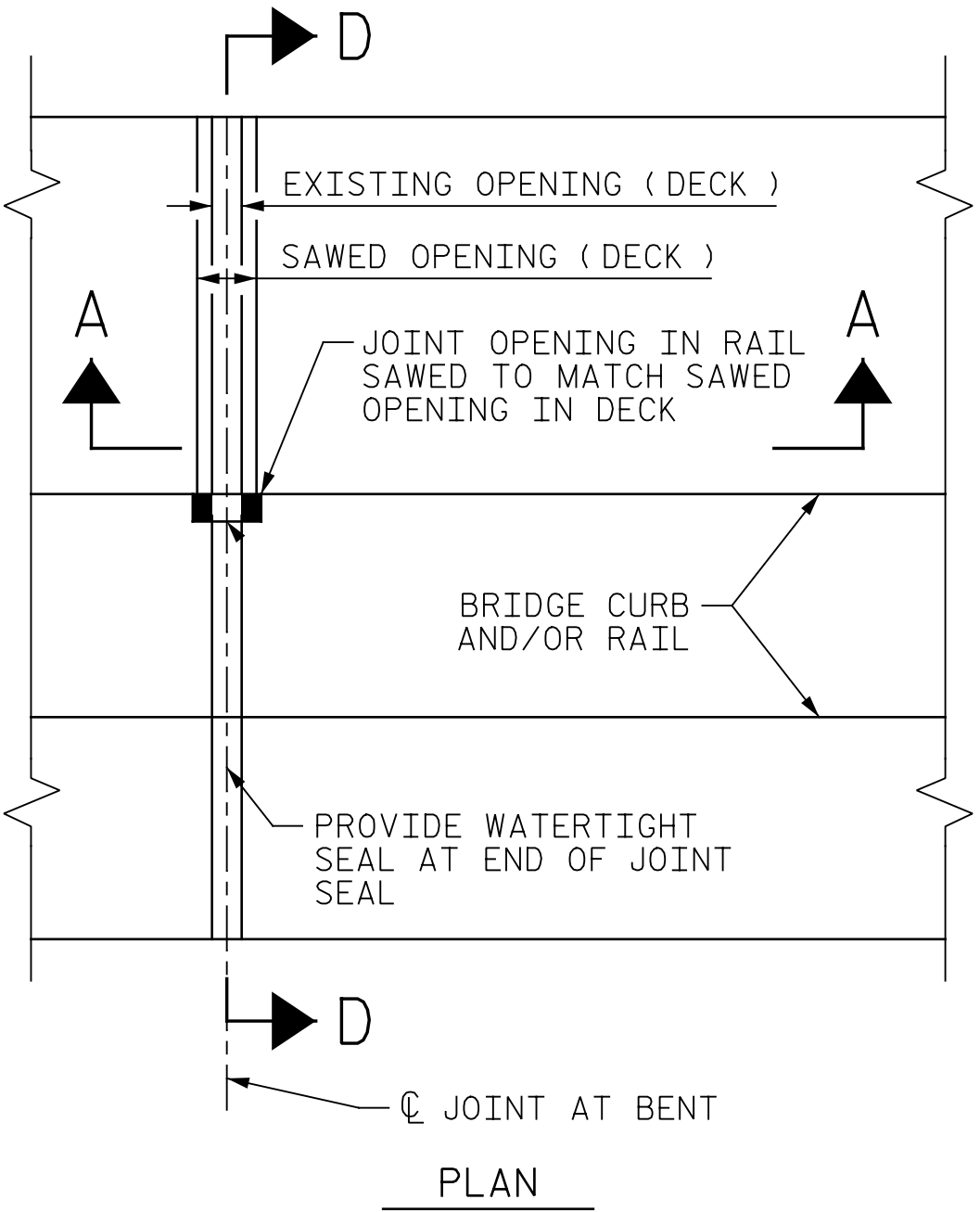


PROPOSED SILICONE JOINT SEAL

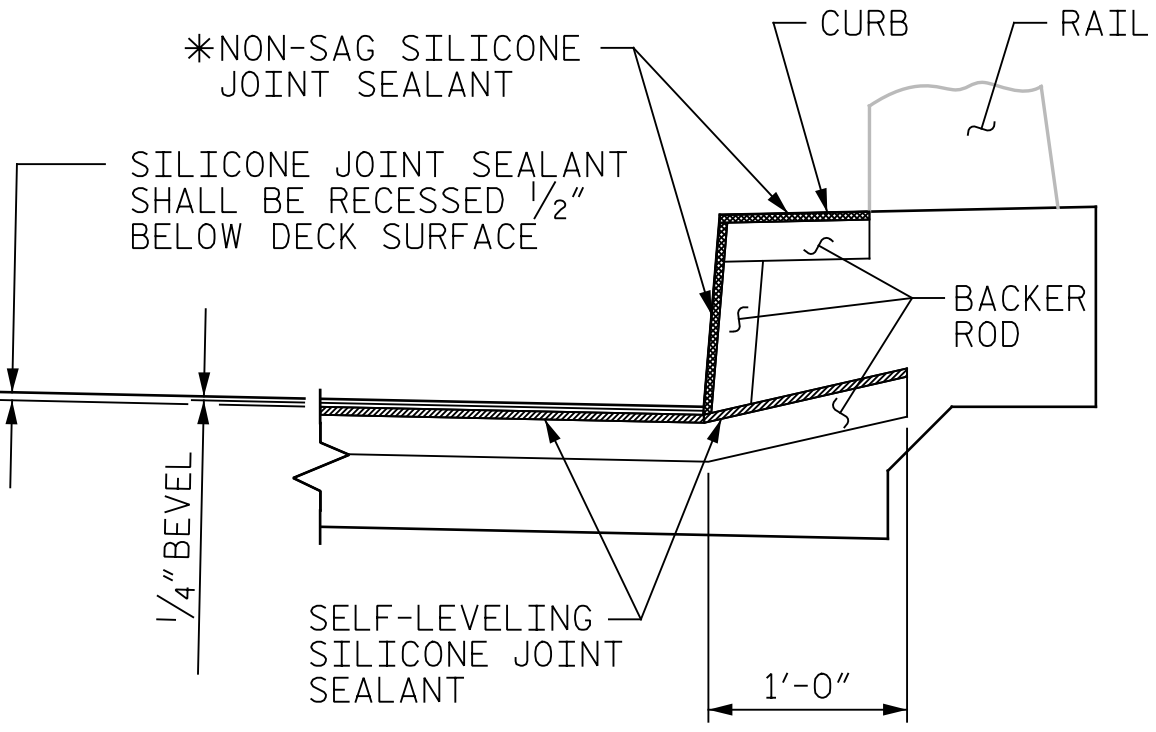
SECTION A-A
PROPOSED JOINT



DETAIL A



*SELF LEVELING SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF NON-SAG SILICONE JOINT SEALANT.



SECTION D-D

JOINT SEAL DETAILS AT BENT

PROJECT NO. 14BPR.3.1
HENDERSON COUNTY
BRIDGE NO. 34



DocuSigned by:
Eric B. Nelson
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAIL
FOR SILICONE
JOINT SEAL

REVISIONS						SHEET NO. S-49
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 142
2			4			

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

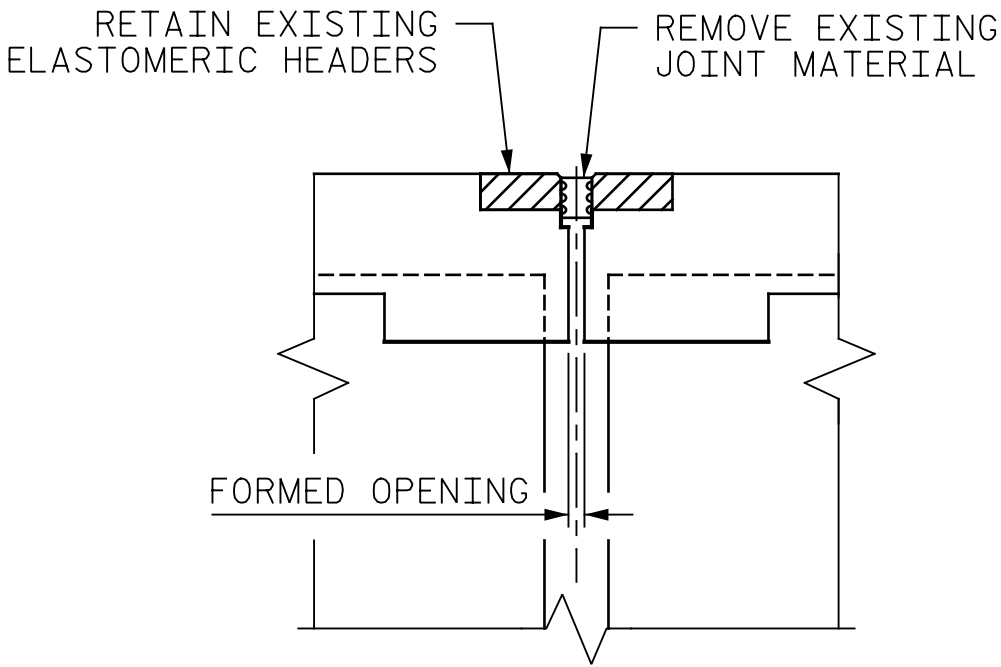
PLANS PREPARED BY:
Gannett Fleming
Excellence Delivered *As Promised*
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

NOTES

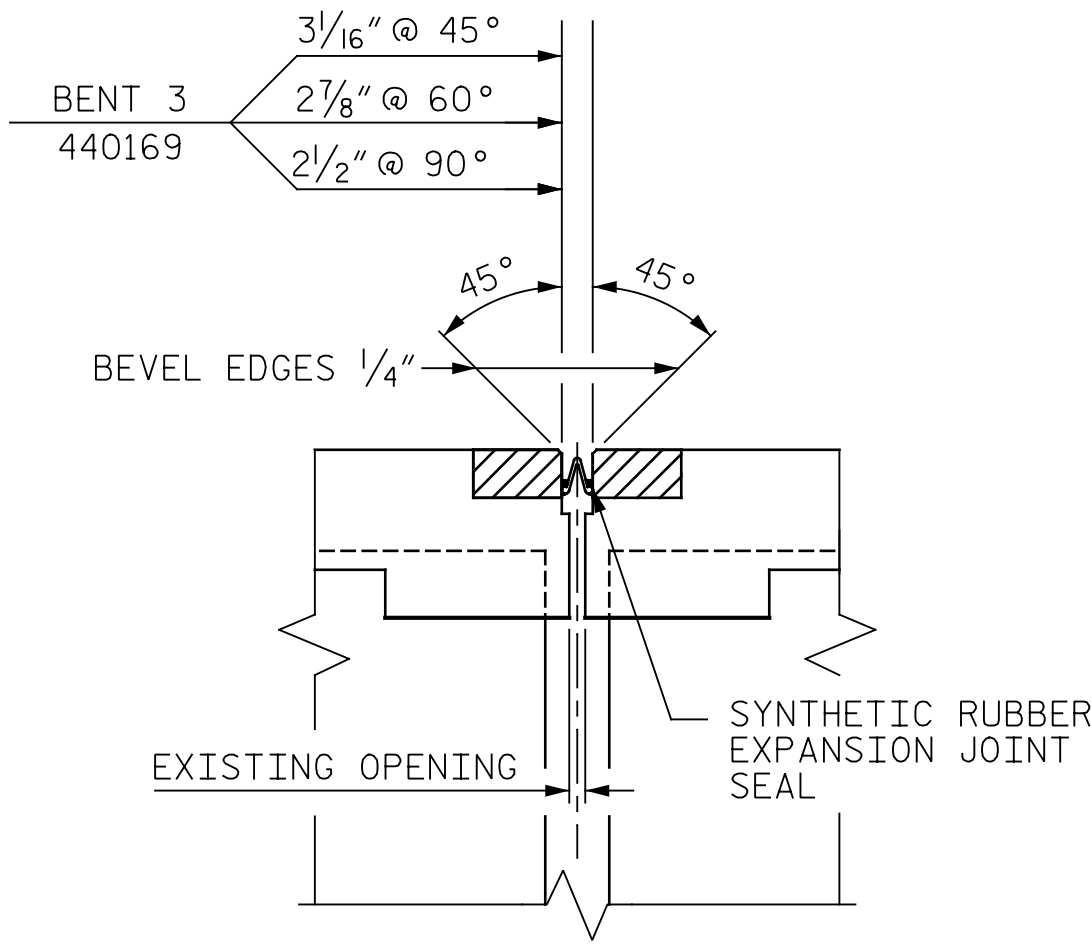
FOR SYNTHETIC RUBBER JOINT SEAL, SEE SPECIAL PROVISIONS.

FOR 440169, PROVIDE JOINT SEALS AT BENT 3 WITH A MOVEMENT RATING OF 4"



EXISTING JOINT
(FOAM WITH ELASTOMERIC HEADER)

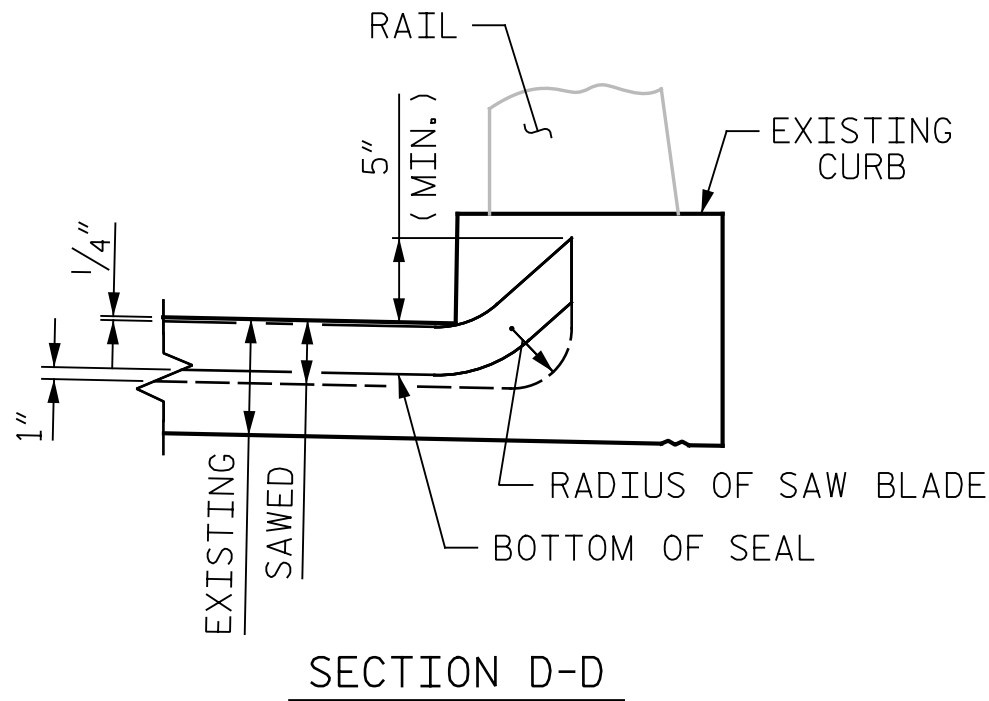
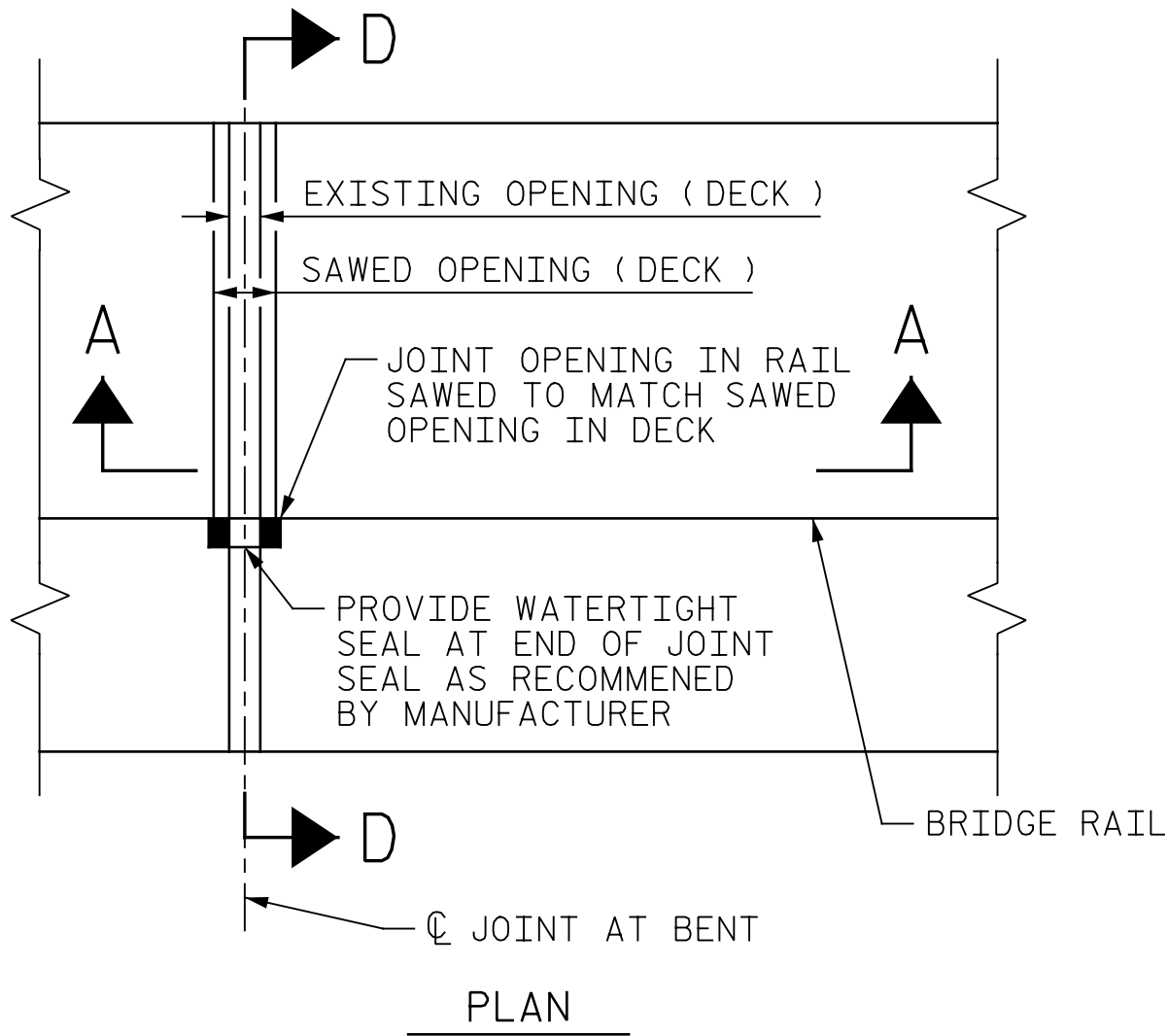
EXISTING JOINT TYPES



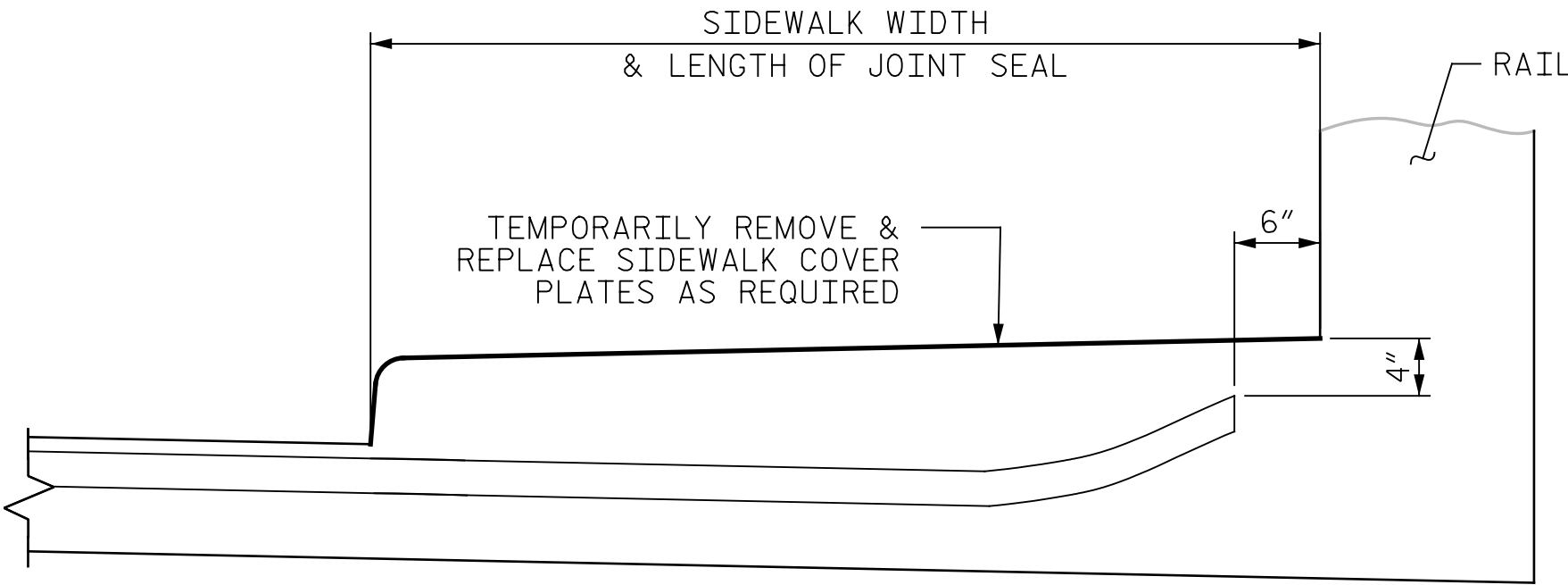
PROPOSED SYNTHETIC RUBBER JOINT SEAL

SECTION A-A
PROPOSED JOINT

	SYNTHETIC JOINT SEAL (LF)				
BRIDGE NO.	EB 1	BENT 1	BENT 2	BENT 3	EB 2
440169	-	-	-	78.7	-



JOINT SEAL DETAILS AT BENT



JOINT SEAL DETAILS AT SIDEWALK

PROJECT NO. 14BPR.3.1
HENDERSON COUNTY
BRIDGE NO. 169



DocuSigned by:
Eric B. Nelson, Jr.
4/3/2018

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAIL
FOR SYNTHETIC
RUBBER JOINT SEAL

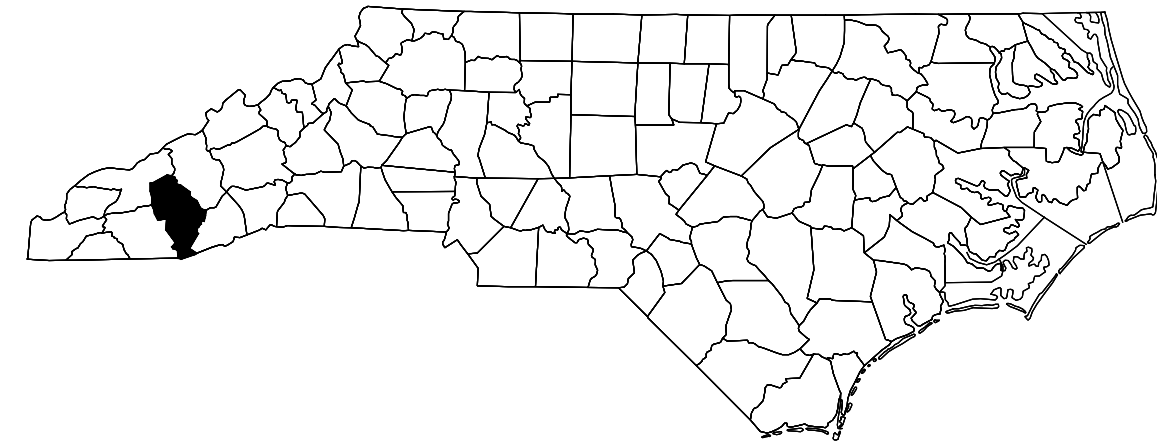
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-50
1			3			TOTAL SHEETS
2			4			142

DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
 Gannett Fleming
Excellence Delivered *As Promised*

2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
(919) 420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.	14BPR.3.1	S-51

JACKSON COUNTY

LOCATION: JACKSON COUNTY:

- BRIDGE #005 ON US441 OVER US74

BRIDGE #029 ON SR1456 OVER SCOTTS CREEK

BRIDGE #052 ON NC107 OVER CANEY FORK CREEK

BRIDGE #085 ON US23, 74 NBL OVER SR1383

BRIDGE #096 ON US23, 74 SBL OVER SR1383

BRIDGE #100 ON US23, 74 NBL OVER SR1380
- BRIDGE #104 ON US23, 74 SBL OVER SR1380

BRIDGE #106 ON US23 BUS. OVER US23, 74

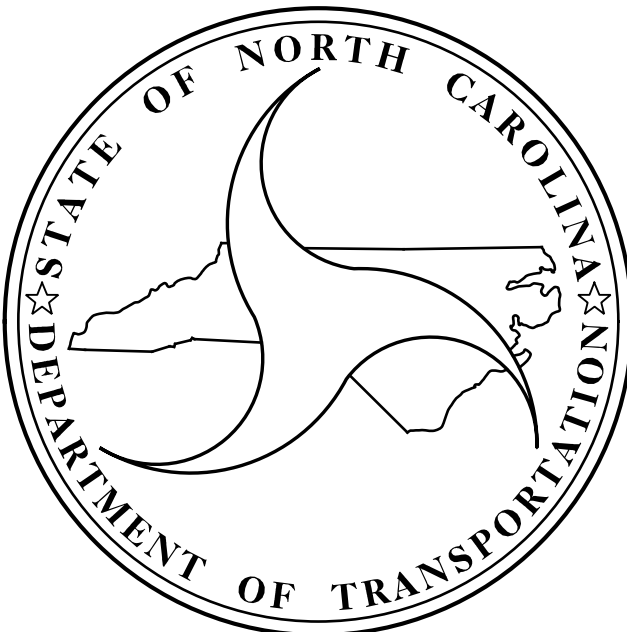
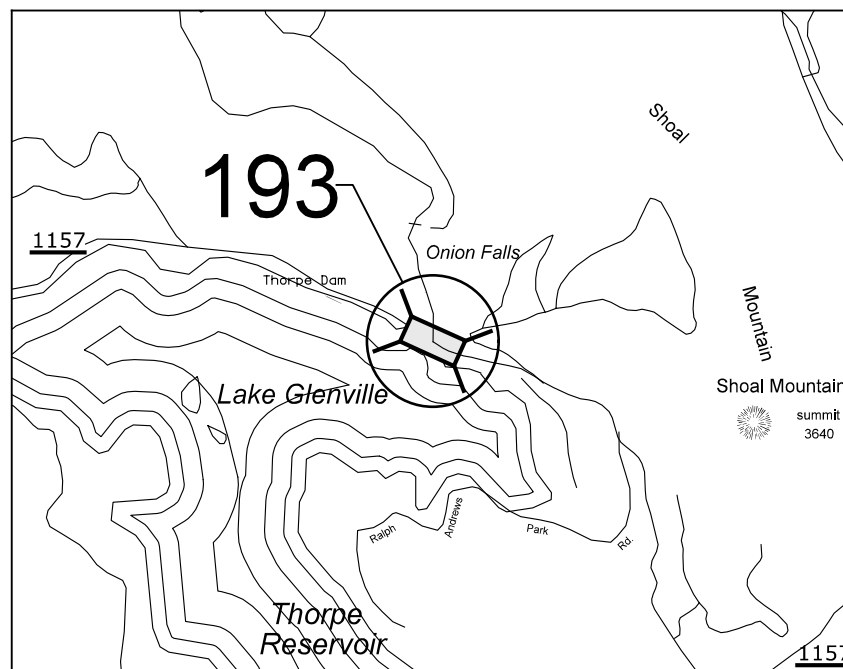
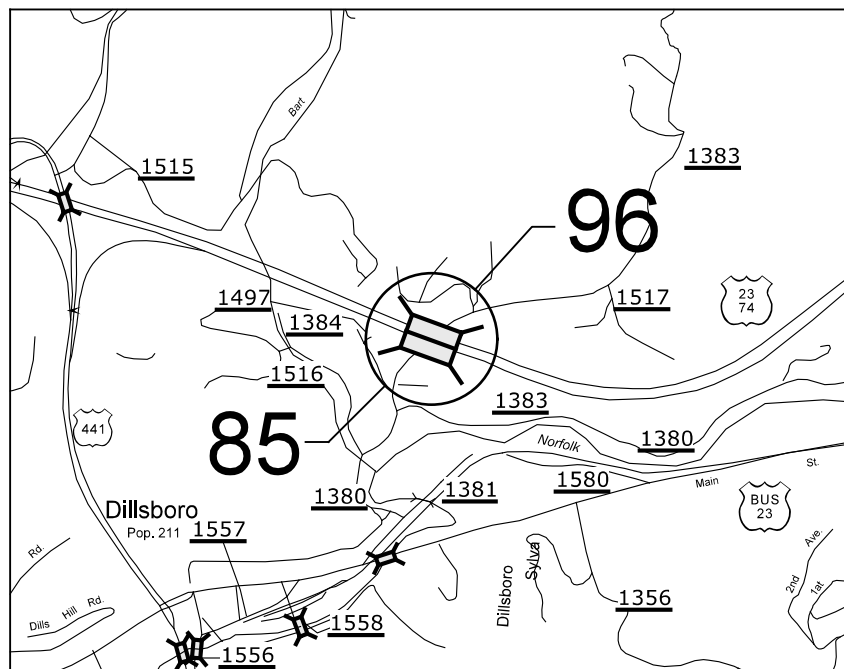
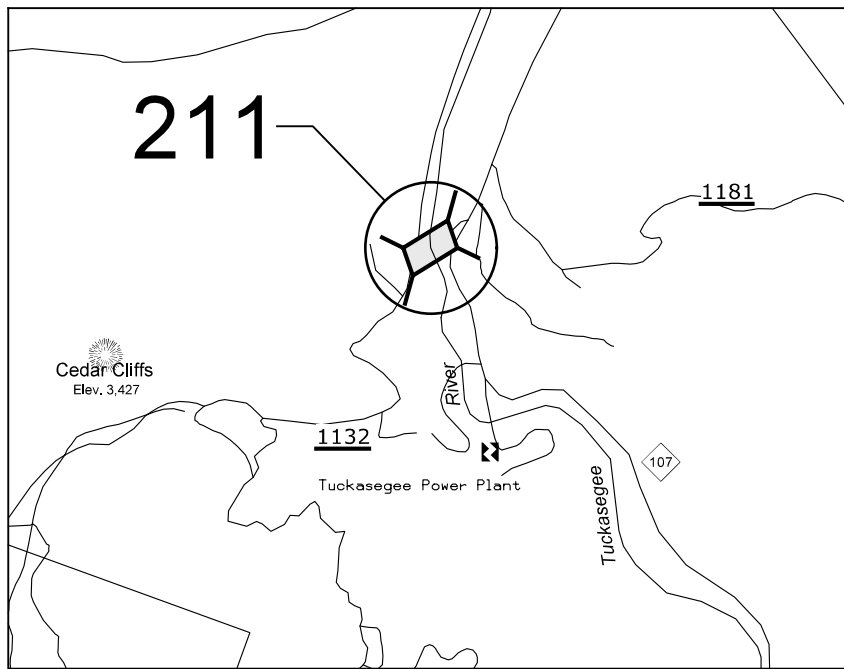
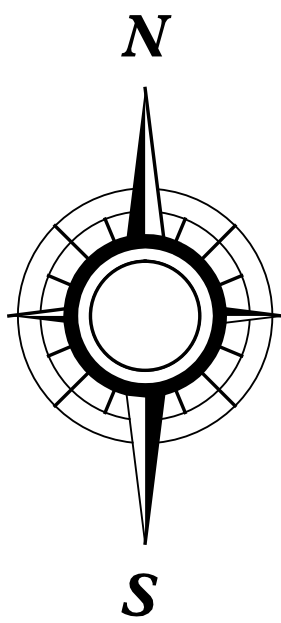
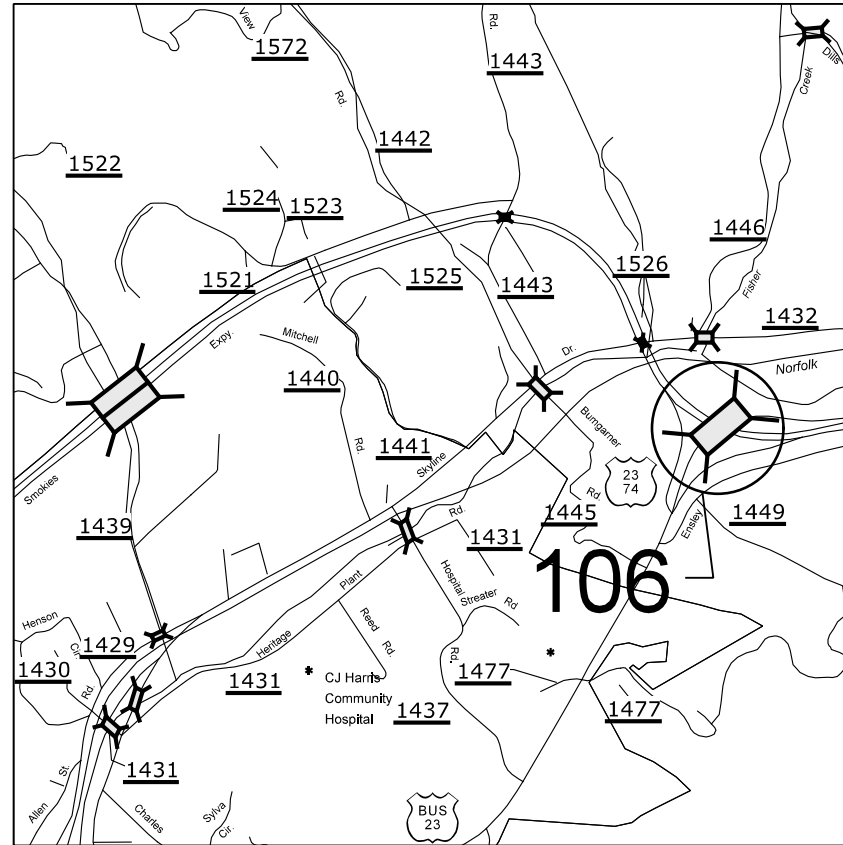
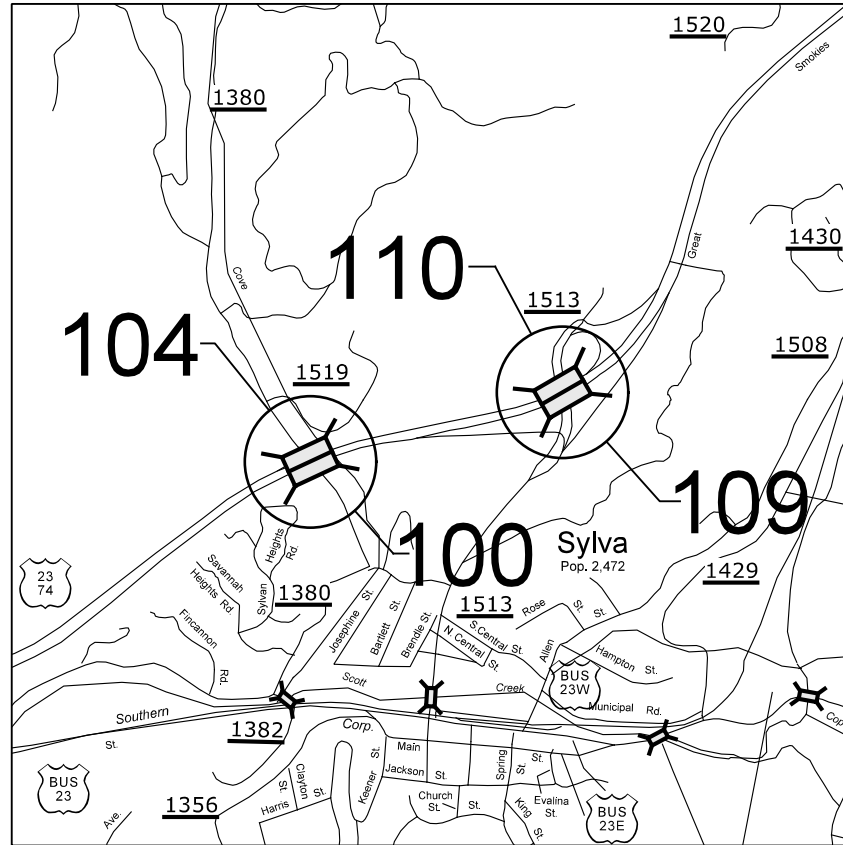
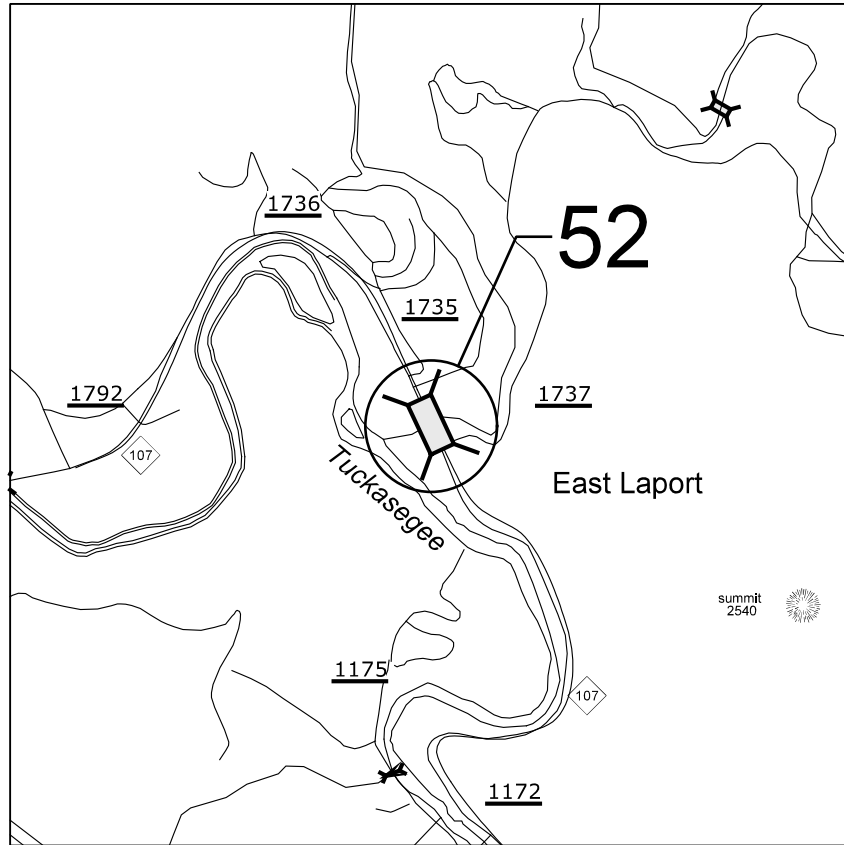
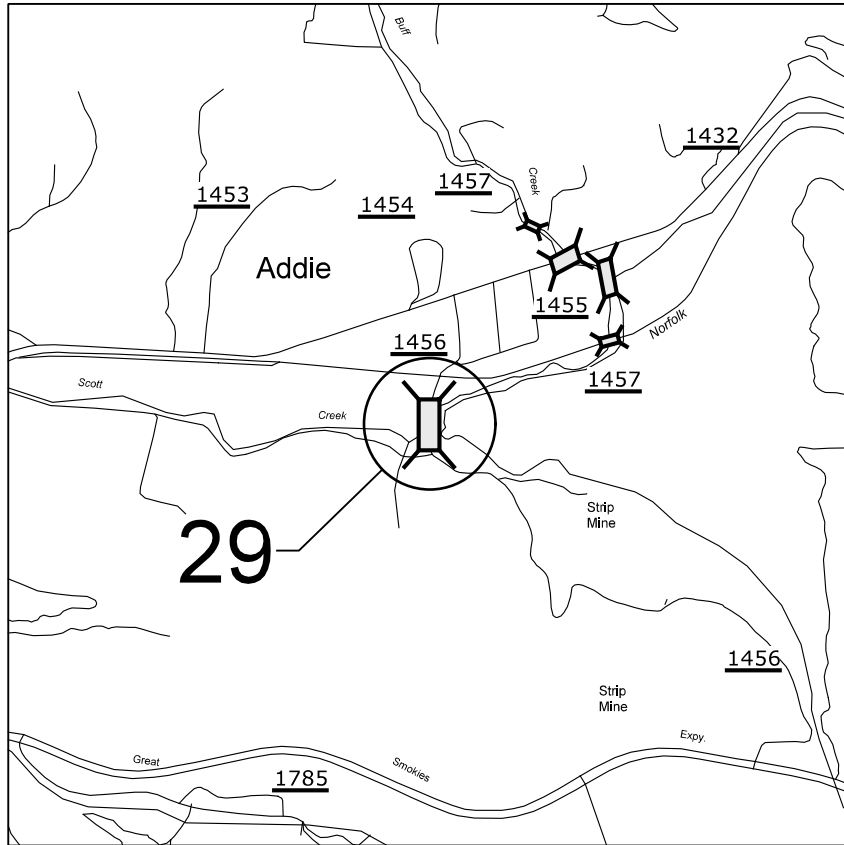
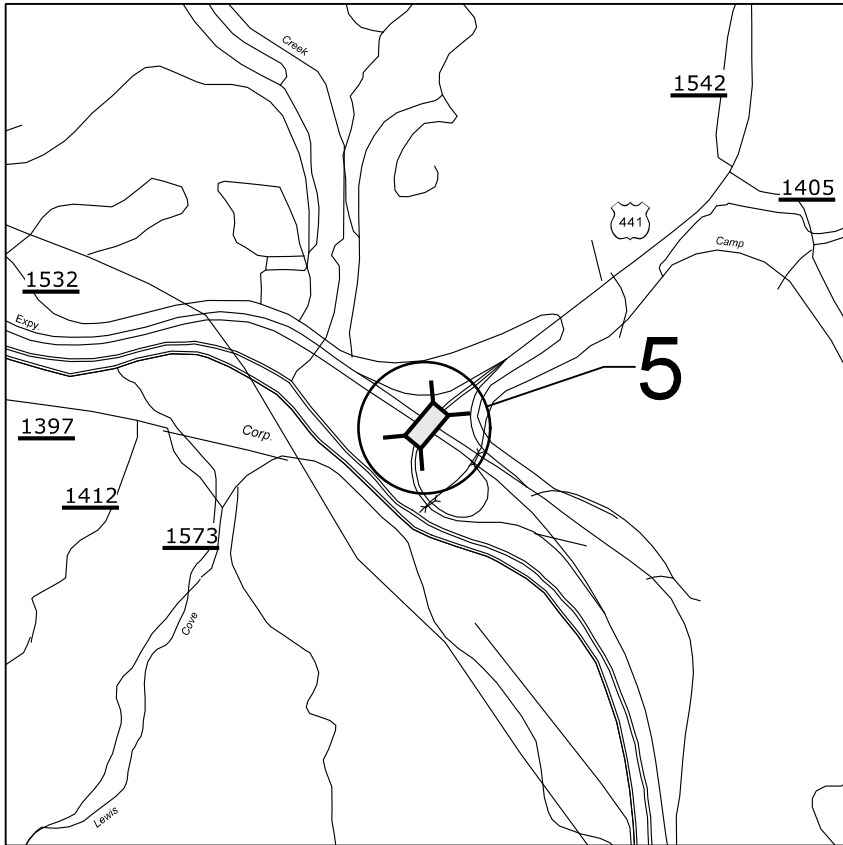
BRIDGE #109 ON US23, 74 NBL OVER SR1513

BRIDGE #110 ON US23, 74 SBL OVER SR1513

BRIDGE #193 ON SR1157 OVER THORPE DAM SPILLWAY

BRIDGE #211 ON SR1132 OVER WEST FORK TUCKASEGEE RIVER

TYPE OF WORK: BRIDGE PRESERVATION – DECK OVERLAY WITH LATEX MODIFIED CONCRETE, LATEX MODIFIED CONCRETE – VERY EARLY STRENGTH AND BRIDGE JOINT REPLACEMENTS



DESIGN DATA JACKSON COUNTY			
#005	ADT 2012	=	15,000
#029	ADT 2012	=	1,100
#052	ADT 2013	=	5,400
#085	ADT 2012	=	9,500
#096	ADT 2012	=	9,500
#100	ADT 2012	=	9,500
#104	ADT 2012	=	9,500
#106	ADT 2013	=	13,000
#109	ADT 2012	=	7,500
#110	ADT 2012	=	7,500
#193	ADT 2011	=	1,400
#211	ADT 1996	=	150

PROJECT LENGTH JACKSON COUNTY			
#005	=	0.041	MILE
#029	=	0.023	MILE
#052	=	0.026	MILE
#085	=	0.031	MILE
#096	=	0.025	MILE
#100	=	0.023	MILE
#104	=	0.020	MILE
#106	=	0.042	MILE
#109	=	0.033	MILE
#110	=	0.030	MILE
#193	=	0.073	MILE
#211	=	0.023	MILE

PLANS PREPARED BY:



Gannett Fleming

Excellence Delivered As Promised

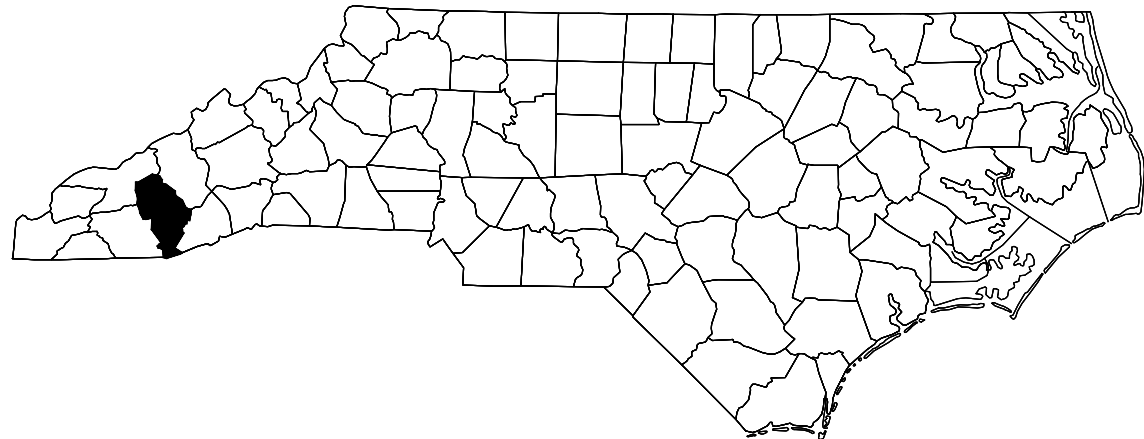
2610 Wycliff Road
Suite 102
Raleigh NC 27607-3073
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NC Lic. No. F-0270

DocuSigned by:
Eric B. Nelson Jr.
BARR91762D7044A...

4/3/2018





STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JACKSON COUNTY

LOCATION: JACKSON COUNTY:

BRIDGE #005 ON US441 OVER US74	BRIDGE #104 ON US23, 74 SBL OVER SR1380
BRIDGE #029 ON SR1456 OVER SCOTTS CREEK	BRIDGE #106 ON US23 BUS. OVER US23, 74
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TYPE OF WORK: BRIDGE PRESERVATION - DECK OVERLAY WITH LATEX MODIFIED CONCRETE, LATEX MODIFIED CONCRETE - VERY EARLY STRENGTH AND BRIDGE JOINT REPLACEMENTS

INDEX OF SHEETS

SHEET NO.

S-51
S-52
S-53
S-54 THRU S-63
S-64 THRU S-71
S-72 THRU S-79
S-80 THRU S-88
S-89 THRU S-97
S-98 THRU S-106
S-107 THRU S-115
S-116 THRU S-119

DESCRIPTION

TITLE SHEET
INDEX OF SHEETS
BILL OF MATERIAL FOR JACKSON COUNTY
STRUCTURAL PLANS - 490005
STRUCTURAL PLANS - 490085
STRUCTURAL PLANS - 490096
STRUCTURAL PLANS - 490100
STRUCTURAL PLANS - 490104
STRUCTURAL PLANS - 490109
STRUCTURAL PLANS - 490110
STRUCTURAL PLANS - JOINT REPLACEMENTS

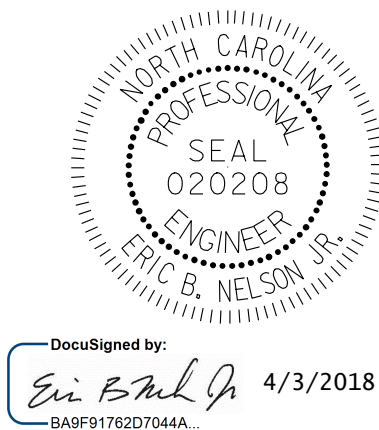
BILL OF MATERAIL FOR JACKSON COUNTY														
	INCIDENTAL MILLING	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C	ASPHALT BINDER FOR PLANT MIX	GROOVING BRIDGE FLOORS	CLASS AA CONCRETE	REINFORCING STEEL	CLASS II, SURFACE PREPARATION	*CLASS III, SURFACE PREPARATION	LATEX MODIFIED CONCRETE OVERLAY	PLACING AND FINISHING OF LATEX MOD. CONCRETE OVERLAY	VOLUMETRIC MIXER	SILICONE JOINT SEALANT	SYNTHETIC RUBBER EXPANSION JOINT SEAL
	SQ. FT.	TONS	TONS	TONS	SQ. FT.	CU. YDS.	LBS.	SQ. YDS.	SQ. YDS.	CU. YDS.	SQ. YDS.	LUMP SUM	LN. FT.	LN. FT.
490005	384	33	-	2.0	9595	-	-	47.3	-	-	-	LUMP SUM	292.5	-
490029	-	-	-	-	-	-	-	-	-	-	-	LUMP SUM	83.0	-
490052	-	-	-	-	-	-	-	-	-	-	-	LUMP SUM	188.0	-
490085	439	-	37	2.5	6019	4.0	394	1.2	-	43.2	732	-	188.8	-
490096	438	-	37	2.5	4867	4.0	394	22.2	-	35.0	596	-	188.8	-
490100	459	-	39	2.5	4406	3.8	384	56.6	-	36.1	551	-	180.0	-
490104	391	-	33	2.0	3737	3.8	384	31.7	-	30.8	471	-	180.0	-
490106	-	-	-	-	-	-	-	-	-	-	-	LUMP SUM	104.4	-
490109	379	-	32	2.0	6347	3.8	380	29.4	0.6	51.5	782	-	176.0	-
490110	553	-	47	3.0	6998	4.2	426	9.8	-	56.1	852	-	208.0	-
490193	-	-	-	-	-	-	-	-	-	-	-	LUMP SUM	66.2	64.2
490211	-	-	-	-	-	-	-	-	-	-	-	LUMP SUM	54.0	-
TOTAL	3043	33	225	16.5	41969	23.6	2362	198.2	0.6	252.7	3984	LUMP SUM	1909.7	64.2

* ESTIMATED QUANTITY FOR BIDDING PURPOSES.

	LATEX MODIFIED CONCRETE OVERLAY-VERY EARLY STRENGTH	*CONCRETE FOR DECK REPAIR	ELASTOMERIC CONCRETE	BRIDGE JOINT DEMOLITION	HYDRO-DEMOLITION OF BRIDGE DECK	PLACING AND FINISHING LATEX MOD. CONCRETE OVERLAY-VES	REMOVE AND REPLACE BRIDGE DECK ISLAND	SCARIFYING BRIDGE DECK
	CU. YDS.	CU. FT.	CU. FT.	SQ. FT.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.
490005	80.5	-	59.4	224.9	1372	1372	114.7	1372
490029	-	-	16.8	67.2	-	-	-	-
490052	-	-	44.0	176.0	-	-	-	-
490085	-	-	22.6	44.4	732	-	-	745
490096	-	-	22.6	44.4	596	-	-	608
490100	-	40.0	42.4	125.7	551	-	-	561
490104	-	40.0	42.4	125.7	471	-	-	481
490106	-	-	-	-	-	-	-	-
490109	-	-	41.4	148.0	782	-	-	792
490110	-	-	50.4	179.6	852	-	-	872
490193	-	-	30.0	120.4	-	-	-	-
490211	-	-	-	-	-	-	-	-
TOTAL	80.5	80.0	372.0	1256.3	5356	1372	114.7	5431

* ESTIMATED QUANTITY FOR BIDDING PURPOSES.

PROJECT NO. 17BPR.3.1
JACKSON COUNTY



DRAWN BY : M. LEE DATE : 2/2018
CHECKED BY : R. NELSON DATE : 2/2018

PLANS PREPARED BY:
 Gannett Fleming
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BILL OF MATERIAL
FOR JACKSON COUNTY

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-53
1			3			TOTAL SHEETS 142
2			4			